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Information Bureaux

Report of Proceedings

of the

NINETEENTH CONFERENCE

held at

The Royal Society, London

DECEMBER 9th and 10th, 1944



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Editorial Note

THE papers that follow constitute a record of the proceedings of the Nineteenth Conference of the Association. Written papers prepared in advance by the speakers have been reprinted in full. Careful reports of the discussions were taken, and summaries as accurate and complete as possible have been printed. The expert help of those members who prepared the reports for compilation of these summaries is gratefully acknowledged.

Reports are given (pages 88 and 89) regarding the work of the British Council in the Empire, the British Union Catalogue of Periodicals, the National Central Library and the Inter-Allied Book Centre. For these we are indebted to the courtesy of the Secretary of the British Council, of Mr. Theodore Besterman, Dr. Luxmoore Newcombe and Mr. B. M. Headicar, respectively.

An index to the contents of the Report is printed at the end. Copies of the Reports of sixteen previous Conferences are still available, but the Reports of the Second and Tenth Conferences are out of print. The Fifth Report contains an index to the first five. It is regretted that, owing to unforeseen circumstances, the compilation of a cumulative index to the Proceedings to date is not yet begun.

These Reports are indexed in the Industrial Arts Index of the H. W. Wilson Company, of New York.

52, BLOOMSBURY STREET,
LONDON, W.C.1, 3 April, 1945

JAMES J. EATON
Hon. Editor

The Year's Work of Aslib, 1943-44

(A report presented at the Annual General Meeting held at the Royal Society on September 16th, 1944).

GENERAL

The progress made by Aslib in 1942-43 has been fully maintained in the year under review, as can be seen from the notes on the separate activities given later in this report. The outstanding events of the year have been the Rockefeller grant in support of the project for a Union Catalogue of Periodicals in British Libraries, and the recognition by H.M. Government of Aslib's potential value expressed through a promise of a grant in aid to be administered through the Department of Scientific and Industrial Research.

THE PRESIDENT

Sir Frederic Kenyon, G.B.E., K.C.B., has kindly consented to accept nomination as President for the year 1944-45. It is good augury for Aslib that it should start its wider sphere of activities under the aegis of so distinguished a scholar and man of letters. Our hearty thanks should be given to the retiring President, Professor R. S. Hutton, who has led and assisted Aslib through the two past eventful years.

THE COUNCIL AND EXECUTIVE COMMITTEE

Nine meetings of the Executive Committee were held during the year and, in addition, three full Council Meetings were called. Special Sub-committees were appointed to deal with Publications and Editorial matters (Chairman, Mr. Theodore Besterman; Hon. Secretary, Miss A. M. Mostel); Public Relations and Development (Chairman, Mr. F. C. Mitchell); Finance (Chairman, Mr. E. Lancaster-Jones); Education (Chairman, Mr. E. R. McColvin); and the 1944 Conference (Chairman, Professor R. S. Hutton).

FINANCE AND MEMBERSHIP

The Audited Accounts for the year ended June 30, 1944, have been circulated to all members and will be presented for acceptance at the 1944 Annual General Meeting. Membership of the Association continues to show a steady increase and now numbers 475 as against 390 at the same period in 1943 and 328 in 1942. Six resignations were received.

At its meeting in January, 1944, the Aslib Council decided to raise the membership subscriptions in order to meet the greatly increased overhead expenses and to give Aslib an income which would make it possible to move to larger premises, to meet its augmented responsibilities.

The membership of Aslib is so varied and the consequent services required differ so greatly that it would have been impracticable to make the increase equal throughout the membership. The Council therefore decided to raise the subscription to a minimum of £3 3s. per annum for most classes of non-profit making concerns and to a minimum of £5 5s. for most classes of profit making organisations. Higher subscriptions are being paid by those organisations which make extensive use of the special services. It was further decided that any member who paid a subscription of more than £10 10s. per annum should be entitled a Patron member.

This decision to raise the subscription rates was accepted by the great majority of the members and, as the numbers given above testify, has produced very few resignations. Its results are reflected to some extent in the income received during the year ended June 30, 1944, but since the majority of the subscriptions fall due on July 1, the full effect does not show in the year under review. This rise of income has become of very great importance since the Government's decision to recognise Aslib's value as a link between sources of information in Government, research and industrial organisations. The recognition will take the form of a grant (administered through the Department of Scientific and Industrial Research) which will become operative when the Aslib subscriptions from British members reach the sum of £1,500 and will increase in proportion to the increase in such subscriptions.

The excess of expenditure over income shown in the accounts is due to the fact that the organisation is expanding and the income lags to some extent behind the necessary equivalent. A more favourable balance is confidently expected when more stable conditions are attained.

PREMISES

Since it is confidently expected that Aslib will be able to earn the grant offered by the Government during the year 1944-45, it has been possible to look for more adequate premises, and it is hoped that a move may be made early in 1945. The only suitable building available has suffered through bomb blast, and the scarcity of labour owing to flying bomb damage makes it unlikely that repairs can be put in hand immediately. This means a continuation of the present difficult conditions for a further few months, but it is greatly to be hoped that the next Annual General Meeting will find Aslib in a more worthy home and working under conditions that will allow of better and more extended services to all members.

CONFERENCE

The Eighteenth Annual Conference was held at the rooms of the Royal Society during the week-end of September 18 and 19, 1943. It was a successful meeting and more than 180 delegates and guests attended.

BRITISH UNION CATALOGUE OF PERIODICALS

The Committee appointed by Aslib, under the Chairmanship of Dr. L. Newcombe, continued its meetings until early in 1944, when it was learnt that the Rockefeller Foundation had appropriated up to £14,000 for a period of five years, to be devoted to the compilation of the Catalogue. A Council was then appointed representing the following bodies: Aslib; Library Association; National Central Library; Joint Standing Committee on Library Co-operation; Royal Society; British Academy; British Museum; Bibliographical Society; Science Museum Library. Its first meeting was held in March, 1944, when Mr. Theodore Besterman was appointed Editor and Executive Officer. Facilities for the compilation of the Catalogue have been kindly provided at the British Museum.

TRAINING COURSE IN SPECIAL LIBRARIANSHIP

The success of the first training course and the continued demand for such lectures encouraged the Executive Committee to organise further courses of the same kind. The first of these was a week's intensive course of twelve lectures held in August, 1943. Twenty-seven students attended this course, of whom twenty-five took the examination, twenty-one attaining a satisfactory or high standard. The course of lectures was repeated in the Autumn of 1943 over a twelve-week period. Thirty-one students attended and twenty-two took the examination; of these, twenty wrote satisfactory papers. It was then felt that sufficient experience had been gained in the three courses to justify an *ad hoc* committee being set up to consider in what way the syllabus might be improved. The Committee composed of members elected from the Executive, the Hon. Officers and three of the students who had attended earlier courses met, and as a result of their discussions modifications were made. A course modelled on the new syllabus was given in the spring of 1944. Students who had attended earlier courses were given the opportunity of attending single lectures again. Twenty-two new students took the full course and four took part of it. Fourteen students took the examination and all passed satisfactorily. Further courses are contemplated.

The Executive Committee felt that the whole question of the training of special librarians should be reviewed by Aslib and therefore established a Committee to consider this wider question. A result of these preliminary discussions was the questionnaire on special library training which was circulated to all members. An analysis of the answers to this questionnaire

will be given at a session of the 1944 Conference which is to deal with the status and training of Special Librarians.

PUBLICATIONS

The newly appointed Publications and Editorial Committee had its first meeting in October, 1943, and has held monthly meetings since then. In order to ease the pressure of work in the office a policy of appointing outside editors for several of Aslib's publications has been adopted. The Report of the Proceedings of the Eighteenth Conference was edited by Mr. J. J. Eaton. Since the beginning of 1944 the *Aslib Book List* has been edited by Dr. R. S. Schultze. The preliminary work of compilation is still undertaken in the office. Delays in the issue of the *Book List* and the Report were due to illness, staff shortage and various other war-time difficulties. It is hoped to bring the publication of the *Book List* up to date by publishing the July and October numbers in one double issue. There are now 422 subscribers to the *Book List* outside the membership of Aslib. This figure includes 239 copies distributed through the British Council. Aslib is also contributing lists of British books on Science (other than Medicine), Technology, Architecture and Town-planning to the monthly publication of *British Book News*, which is distributed abroad and in the Empire.

The Quarterly Bulletin ASLIB INFORMATION has, since January, been edited by Mr. A. B. Agard Evans. It is hoped that the size of the Bulletin may be increased shortly. To meet the growing demand for a book on the work of special libraries, Aslib is issuing a manual on the *Technique of Special Librarianship*. This short book has been written by Mr. J. E. Wright, and it is hoped that it will be available shortly.

The issue of further war-time Guides to sources of specialised information had to be virtually suspended owing to the great increase of administrative work. As soon as the larger premises make an increase in the clerical staff possible, a swift output of these and of new editions of other Aslib publications may be expected.

OTHER ACTIVITIES

The Enquiry Bureau dealt with over 1,000 enquiries during the year, about half of which were concerned with the location of books or periodicals.

Aslib has continued to work on the preparation of a new abridged edition of the Universal Decimal Classification and to participate in the supervision of a new English edition of the full Classification. Four parts of this have now been published by British Standards Institution, comprising the General Introduction, Auxiliary and Classes 0 and 51-59.

The Index to Translations proposed at the 1942 Conference is growing steadily, and several Aslib members now regularly contribute card records of the translations made within their organisations. The value of the Index would be very much increased if further members would participate in the scheme, as outlined in No. 2 of the Aslib Memoranda.

The problems of micro-filming British books which are out of print was discussed with the Publishers' Association and the Society of Authors and a provisional agreement was reached. The Aslib Micro-film Service has already handled several pieces of work on these lines for British publishers, and an extension of its activities in this field will probably result from the growing shortage of certain types of books.

In closing this year's summary of Aslib's work, we must, once again, record our debt to many friends whose co-operation has helped to maintain our services.

EDWARD CARTER
THEODORE BESTERMAN
E. LANCASTER-JONES
E. M. R. DITMAS

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Organised Knowledge in the World of the Future

By SIR FREDERIC KENYON, G.B.E., K.C.B.

President of Aslib

Sixteen years ago I had the honour of contributing an introduction to the first edition of the *Aslib Directory*, an honour which I shared with the late Lord Rutherford, then President of the Royal Society. It was, I think, the first public appearance in print of the Association of Special Libraries and Information Bureaux, and (though now needing revision) it still represents the central activity of the Association and the reason of its existence, the organisation of knowledge for the service of the community. Now, after sixteen years, in which I have had no part in your labours, you have honoured me again by inviting me to be your President for a year. I confess that the more I think of it, the more I am amazed at your choice. You are a young and growing society, looking forward to the future, and considering how you can best help to meet the needs of the community in the terribly difficult generation which will follow the war; yet you choose as your President one who cannot look to see that generation or to take part in its work, whose experience is of the past and who cannot be looked to for leadership in the future.

But since you made the choice (possibly because the claims of war work limited your field of selection) I could but suppose that you thought that I could be of some service, if only as a stop-gap, by accepting the post: and this made acceptance not merely an honour, but a duty. Those who are too old to fight can perhaps best serve their country by undertaking such sedentary duties as sitting on committees or presiding at meetings, and so keeping alive the work of institutions and societies until the younger men are free to return and carry on the torch into the years to come.

Since, however, I have not been concerned with the detailed work of Aslib in the past or in the plans which those who guide its fortunes have in mind for the future, you will hardly expect me to express opinions, still less to attempt to offer guidance in the details of its activities or its policy. I can only deal with generalities, and offer certain considerations on matters of principle. That perhaps is admissible in a presidential address; you will no doubt get down to brass tacks in the discussions which will occupy the main part of this conference.

First, let me congratulate the Association on what it has already achieved, an achievement which reflects credit on the vision of those who founded it and the efficiency with which it has been developed. Aslib had its origin in the great movement for co-operation, the establishment of which may, I think, be claimed for the Departmental Committee on the Public Library Service, which reported in 1927. It was founded at almost exactly the same time as the Committee was set up, in the autumn of 1924, and it is mentioned in the Committee's report. Its importance was not, I think, so generally recognised at first as it should have been. "Special" libraries were considered as being somewhat outside the regular library field, much as the old Volunteers used to be somewhat coldly regarded by the regular Army. Aslib has, therefore, been left to develop by itself, and I do not know that it is any the worse for that. What has been made abundantly clear is that it supplied a want which has been increasingly felt. It has brought within the orbit of organised library service a great number of industrial and commercial institutions which formerly hardly realised that they stood in need of library service at all. It is not so long ago that it was the reproach of British industry that it did not, as a whole, recognise the necessity of research if it was to hold its place in the world; and research means educated

men, and educated men must have books, and books mean libraries. I hope, and believe, that this reproach will not again be levelled at British industry. The war must have convinced even the most slow to believe of the vital importance of trained research, with every appliance of knowledge, in the hands of men with the best brains. The proof of increased recognition of this fact may be seen in the steadily increasing membership of Aslib. The total of members is now well over 400, and a nearly equal number of non-members subscribe to the *Aslib Book-List*. Its publications are in great request, the demand for them exceeding the supply possible under those war-time restrictions on the supply of food for the mind which many of us feel to be a very short-sighted form of economy.

The *raison d'être* of Aslib is the service of humanity by the organised supply of knowledge. I say of humanity, and not merely of industry, because, although the service of industry has been its first and most obvious activity, I believe (and this is the doctrine which I wish most emphatically to enforce) that knowledge must not be restricted to its utilitarian application to industry, but must be applied in the most liberal spirit to the whole of our national life. Nevertheless, this utilitarian application is by no means to be despised. Industry must be intellectualised, as the first stage in raising the cultural level of our national life, as well as in increasing its efficiency in its own sphere of action. Knowledge must become all things to all men if by all means it may save some. It must serve those who look to it only for quick returns of material profit, in order to establish its claims to render greater services on a higher level and to advance the general well-being of man as well as to enrich individuals.

It cannot be denied that the English in general have the reputation of being indifferent to knowledge. We are apt to pride ourselves on being practical, on possessing common sense, on being superior to logic and theoretical investigation. And in our public life I think the accusation is justified. Our administrators abroad think first about supplying roads and drainage, and only secondly about education and cultural life. At home, the department of Education takes a lowly place in the ministerial hierarchy, and its headship is normally occupied by a series of politicians on their promotion. The sums of money which the Treasury can be persuaded to supply for cultural objects have in the past been exiguous in comparison with those furnished by many countries much less wealthy than ourselves. Local Government authorities have with difficulty been persuaded to spend money on libraries, museums and record offices. Directors of industrial concerns have allotted miserable sums to research in comparison with some of their foreign rivals, and have demanded quick returns in hard cash from their scientists.

And yet in all this I believe we have done a great injustice to ourselves. It is not true that Englishmen, outside official circles, are indifferent to knowledge, still less that they are behind other peoples in the pursuit of it. English scholarship, if less enterprising than some, has proved itself in the long run sounder, and less liable to go astray after will-o'-the-wisps. English science has been enterprising as well as sound, and has led the way in invention in many fields, though industry has too often allowed the profitable exploitation of its discoveries to fall into foreign hands. Under the pressure of necessity English science has led the way in the deplorable field of inventions for military use. Tanks, Mills bombs, Lewis guns were British inventions in the last war, to which the Germans produced nothing comparable; in the present war we owe our national existence to the superiority of our aeroplanes, and the ingenuity of our scientists has frustrated the most knavish tricks of our enemies. The knowledge, the skill, the inventiveness are there; it is the appreciation of this fact and the utilisation of its results that has been lacking in those who regarded themselves as practical men.

But all this is changing. Never again can practical men deny the practical value of scientific research. Never again (I trust) will industry refuse its aid, or grudge expenditure on free, disinterested studies, knowing that if it thus

casts its bread upon the waters, it will find its return after many, or perhaps not so very many days. And this is the work which Aslib exists to foster. It aims at making knowledge accessible, at directing searchers to the sources whence they may derive information of which they stand in need. It has more than one way of supplying this need. It is a bureau of information, it has its Directory of sources of specialised information, it has its periodical book-lists and war-time guides, its register of specialist translators, its micro-film service (a development with infinite possibilities), its miscellaneous publications, and its training of students in special librarianship. And it has more activities in contemplation which only await the adequate supply of men and money.

All this is better known to you than to me, and I will not go into the details either of your past work or of your programme for the future. I would only ask you to consider some of its implications. Aslib is a system for the canalisation of knowledge, for the irrigation of the fields of industry and humane research of every kind, bringing the fertilising streams of knowledge where they are needed and when they are needed. It assumes as its fundamental postulate the proposition that knowledge is necessary, is, in fact, the key to progress. But what is progress? What is the function of knowledge as we see it in the world of the future?

In the history of human thought the status of the detailed knowledge of man and nature has varied at different times. For the beginnings of organised thought we look inevitably to the Greeks. The earliest Ionian philosophers were singularly indifferent to the exact observation of nature. They sought short cuts to the explanation of the universe, referring it all to a single element, fire, air or water, but making no attempt to support their theories by observation or experiment. They were philosophers meditating in a vacuum, not scientists in the modern sense. On the other hand, Aristotle based all his theories, whether on physical nature or on the ethical and political behaviour of man, on the accumulation of details. On the physical side he amassed information with regard to the structure and conduct of animals, while his theories on politics were buttressed by studies of the constitutions of over 150 communities known to him. He is the founder of scientific method as we know it to-day, and but for the exigences of metre, he and not Plato should have been coupled with Bacon by Tennyson as "the first of those who know." In the early Middle Ages the pendulum swung the other way. Scientific method and scientific study were ignored: most of Aristotle's works were lost to sight, and in spite of a great revival of interest in them in the thirteenth century, due mainly to the influence of Arabic translators and commentaries, it is true to say that Aristotle was known to the Middle Ages chiefly as the metaphysician and logician, not as the student of nature.

In mediaeval times science was generally ignored, except by the Arabs and a few exceptional scholars, such as Roger Bacon. Hence, when the Renaissance infused fresh life into all kinds of study and fuller knowledge of the literature and thought of Greece, Francis Bacon, while acknowledging "the wisdom and integrity of Aristotle" in his "diligent and exquisite history of living creatures," nevertheless denounced him as having subordinated his natural history to his dialectic. He admits that he made frequent use of experiment, but declares that he formed his conclusions first and manipulated his experiments to conform with them. Hence he was more to be condemned than his disciples, the scholastics, who frankly abandoned experiment altogether. Thus instead of having Aristotle as his ally, Bacon couples him with the scholastics as responsible for the barrenness of mediaeval thought, from which he would recall men to the direct study of nature. Though not an effective researcher himself, he became the prophet for modern times of organised knowledge. He proclaimed with reiterated insistence the need for the accumulation of facts, for the intensive interrogation of nature; and though his vision was rather misty, his prophetic insight was sound in principle and fruitful in other hands than his own.

In modern times, and especially in the last century, we have carried this worship of the measurable fact to the extreme. We have been taught that natural science holds the key to all existence, that a world ordered on scientific principles would be the realisation of perfect happiness. I confess that some of these pictures of the reign of science have for me a very chilly and arid feeling ; they seem to leave out of life most of what makes life worth living. They provide central heating and unlimited hot and cold water, but they leave out poetry and art and religion. They raise insistently the question, what is the place of knowledge in the world of the future, and what are the limits of the services which it can render us ? I should like for a few minutes to examine this question of principle, which conditions the service of Aslib to the community.

In its lower ranges, the function of Knowledge is to extend our acquaintance with the material universe, and its aim is to increase our command over nature. Here the achievements of the past century have indeed been marvellous. In no previous period in the history of man has the advance of scientific knowledge been at all comparable. Most of us feel this most in respect of the application of science to our own life. Steam, gas and electricity ; railways, telegraphs, telephones, wireless ; the internal combustion engine, motor-cars, submarines, aeroplanes ; X-rays, inoculations, anaesthetics, aseptic surgery ; all these and many more, with their multiplied applications, have revolutionised our daily life and habits, have given us luxuries which have become necessities, have opened vistas into the infinitely great and the infinitely small which extend our apprehension of the universe to unimaginable distances of time and space. Nay, time and space themselves are dissolved, and science, instead of giving us the neatly ordered universe, completely intelligible and wholly at our disposal, promised us at the end of the last century, appears to be devouring its own children, reducing matter to a function of electricity with an unascertained element of uncertainty, and the universe to a mathematical formula.

But while we may rightly admire the achievements of the mind of man in searching out the secrets of nature, and while it is in every way right that we should try to make this knowledge readily available for those who can make use of it, there are considerations which should give us pause. This knowledge, so highly vaunted and so greatly worshipped, may be put to bad uses as well as good. It may be a curse as easily as a blessing. We have only to look at the world in which we live to realise this. Science has devoted all its powers to multiply machines of destruction, the motor-car makes holocausts of human life on our roads, the beauties of nature are devastated, material needs are multiplied, the very existence of peace, order and rest is threatened. Like Frankenstein, we are in danger of being destroyed by the monster whom we have brought into being. We need not look so far as Germany to realise the perils which attend this vast increase in knowledge and control of material forces.

What, then, can be done about it ? What is the remedy for these threatened and in part realised evils ? The answer is simple in words, but intensely difficult in application. Knowledge needs to be not merely organised but moralised. Just as the material political economy, which was the creation of the nineteenth century and was accepted as the law of our public life almost up to to-day, needs to be moralised in its application to human beings, so the use of knowledge needs to be controlled by principles of higher validity than material power.

We are not the first to realise this. On the contrary we have to go back to our ancestors for the truer view, to correct the declension into materialism into which we have fallen. Let me quote some paragraphs from the writer whom I have described as the prophet of modern organised knowledge, Francis Bacon. It may be a pleasant change for you to listen for a while to the stately periods of Elizabethan speech instead of my more pedestrian phrase.

He is meeting the argument that there may be danger in too much knowledge.

"And as for the conceit that too much knowledge should incline a man to atheism, and that the ignorance of second causes should make a more devout dependence upon God which is the first cause; first it is good to ask the question which Job asked of his friends, 'Will you lie for God, as one man will do for another, to gratify him?' For certain it is that God worketh nothing in nature but by second causes; and if they would have it otherwise believed, it is mere imposture, as it were in favour towards God; and nothing else but to offer to the author of truth the unclean sacrifice of a lie. But farther, it is an assured truth and a conclusion of experience, that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a farther proceeding therein doth bring the mind back again to religion; for in the entrance of philosophy, when the second causes, which are next unto the senses, do offer themselves to the mind of man, if it dwell and stay there, it may induce some oblivion of the highest cause; but when a man passeth on farther, and seeth the dependence of causes and the works of Providence; then, according to the allegory of the poets, he will easily believe that the highest link of nature's chain must needs be tied to the foot of Jupiter's chair. To conclude, therefore, let no man upon a weak conceit of sobriety or an ill-applied moderation, think or maintain that a man can search too far to be too well studied in the book of God's word or in the book of God's works; divinity or philosophy; but rather let men endeavour an endless progress or proficience in both; only let men beware that they apply both to charity, and not to swelling; to use, and not to ostentation; and again, that they do not unwisely mingle or confound these learnings together. . . .

"If then such be the capacity and receipt of the mind of man, it is manifest that there is no danger at all in the proportion or quantity of knowledge, how large soever, lest it should make it swell or outcompass itself; no, but it is merely the quality of Knowledge which, be it in quantity more or less, if it be taken without the true corrective thereof, hath in it some nature of venom or malignity, and some effects of that venom, which is ventosity or swelling. This corrective spice, the mixture whereof maketh knowledge so sovereign, is Charity, which the apostle immediately addeth to the former clause: for so he saith, 'Knowledge bloweth up, but charity buildeth up. . . .'

"But the greatest error of all the rest is the mistaking or misplacing of the last or furthest end of knowledge. For men have entered into a desire of learning and knowledge, sometimes upon a natural curiosity and inquisitive appetite. . . . sometimes for ornament and reputation. . . . and most times for lucre and profession; and seldom sincerely to give a true account of their gift of reason, to the benefit and use of men."

Bacon's remedy for the possible evils arising from the increase of knowledge is not to restrain it but to realise that the knowledge of nature is knowledge of the works of God, and to apply knowledge under the sense of responsibility which should spring from such realisation.

And we can carry the matter further back than Bacon. There are few departments of human thought in which some of the truest and most fundamental things have not been said by the Greeks. While Aristotle was the pioneer in accumulating facts in order to arrive at scientific knowledge, Plato investigated the nature of knowledge itself and laid down the stages of its progression. From the love of things of sense man rises to the love of things of the mind, and thence to the contemplation of the Idea of Good:

"The soul is like the eye: when turned towards the twilight world of things that become and perish, she has opinions only and her sight is dim; she is first of one opinion and then of another, and seems like a thing with no intelligence. But when its gaze is fixed upon an object irradiated by truth and reality, the soul perceives and understands, and is radiant with intelligence. Now that which gives to the objects of nature their truth, and to him who

knows them his power of knowing, is the Idea of Good, the essential nature of Goodness. It is the cause of Knowledge and of Truth ; and so, while you may think of it as an object of knowledge, you will do well to regard it as something beyond truth and knowledge, and, precious as these both are, of still higher worth. . . . Knowledge and Truth are to be regarded as like the Good, but to identify either with the Good is wrong. The Good must hold a yet higher place of honour."

Thus to Plato, as to Bacon. Knowledge was good, but its value was related to something higher still, which Plato called the Idea of Good, and which Bacon called God.

Perhaps I should apologise, because when you asked for an address, I have given you a sermon. But I do not think an apology is really necessary. Certainly I believe, and probably most of you believe also, that the welfare of our nation and of the world at large depends on a change of soul. As Bishop Westcott once said : " You cannot change the fate of man by embellishing his material dwelling. We must touch the soul if we are to change the mode of living." And that our mode of living must be changed, who can doubt ? For the last century or more our public life has been dominated by a political economy of which the fundamental principle was the freest competition ; and our industrial and private lives have been very largely governed by ideals of material welfare. We have seen to what this has brought us. And a change can only be brought about by a change of principle, a change from competition to co-operation, from organization to moralization.

Now to us, as librarians, there should be nothing strange or difficult in such a change. The last twenty years has seen the adoption in the library service of the principle of co-operation not so much as a substitute for competition as for isolation. Our public libraries are no longer isolated units, each serving only its own ratepayers. They all are now ready and eager to serve the whole community. And our special libraries are linked together in a federation by the National Central Library and by the organisation which Aslib places at their disposal and at the service of all those who seek for the information which the special libraries can give. Co-operation is now the life-blood of librarianship.

It is this same spirit which is needed in national and in international affairs. For the restrictive nationalism which is called autarky we want to substitute friendly consultation round the council table, with the view of making the fruits of the earth available wherever they are needed, so that men need no longer starve in the midst of plenty. For the jealousy of classes, for the tug-of-war between employers and employed, for all that is connoted by the class war, we want to substitute class fraternity, the loyal co-operation between employers and employed in the administration of the business, on the prosperity of which their own welfare depends. The evil spirit which has poisoned our private and public life is selfishness ; and selfishness has been so deeply rooted by the political, economic and scientific doctrines of the last century that it can only be eradicated by calling in the strength of a higher principle, call it morality or call it religion.

" Without vision, the people perisheth." " What shall it profit a man if he gain the whole world and lose his own soul ? " The knowledge which we organise, in order to promote it, must be harnessed to moral standards. A late Greek writer once said : " It is rarely that strength and wisdom meet in our mortal nature, but there are times when God brings them together." Knowledge gives strength, and it is for all of us in our several stations to see to it that this strength is yoked to wisdom. In this librarians can serve the community, and Aslib can go forward in its task of organising knowledge in the hope that its utilisation will be directed by wisdom, by the spirit of co-operation and of good will between classes and between nations, and that thus they, in the loyal and zealous exercise of their profession, will be promoting the welfare of the world.

The Imperial Institute : Its Work as a Special Library and Information Bureau

By SIR HARRY LINDSAY, K.C.I.E., C.B.E.

Director of the Imperial Institute

The Imperial Institute was founded in 1887 as a memorial of the Golden Jubilee of Queen Victoria, who laid the foundation stone that year and opened the completed building in 1893. Its objects are two-fold : (a) To furnish all Governments and Government Departments of the Empire, as well as commercial and industrial interests, with scientific and technical information relating to the raw materials of industry and commerce ; (b) by means of its Exhibition Galleries and other aids to visual instruction, to tell the story of the Overseas Empire to the general public and particularly to school-children of this country.

For the purposes of this Conference we are not concerned at present with (b), and this memorandum will, therefore, concentrate on the work of the Institute under (a) above. From this point of view the Institute may be regarded as a technical intelligence bureau, with a peace-time staff of some forty scientists, comprising : tropical agriculturists ; chemists ; chemical technologists, economic botanists ; economic geologists ; mining engineers ; mineralogists and statisticians—all of whom are experts in the particular subjects with which they respectively deal, and all co-operating to provide the information necessary towards the development of the economic resources of the Empire.

For the sake of convenience, the bureau is divided into two main departments, one to handle inquiries relating to plant and animal products, and the other, mineral resources. Each department has its own laboratories, intelligence offices, and indexing staff. There is a single statistical section serving both departments. The library also serves both departments, although for the sake of convenience the volumes dealing with mineral resources are kept separate from those in our general library. The technical index covers most of the relevant trade and scientific publications issued during the past forty years. In addition we have our own laboratories and testing rooms, equipped with modern apparatus enabling us to deal with specimens and samples of raw materials from any part of the Empire, animal, vegetable or mineral ; to examine them, often with the help of small-scale technical trials ; and to report upon them.

Further, we have the great benefit of the experience and advice of two Councils, one on plant and animal products and one on mineral resources. In addition, fifteen consultative Committees are responsible to the two Councils, the subjects dealt with by each Committee falling under one or other of the following heads : timber, hides and skins, tanning materials, vegetable fibres, oilseeds and oils, essential oils, gums and resins and insecticide materials of vegetable origin ; and, on the minerals side, precious metals, base metals, iron and steel and ferro-alloys, coal and petroleum, miscellaneous minerals, chemical industries and mining law.

The following are examples of the types of inquiry dealt with at the Institute :

- (1) Inquiries relating to sources of supply of raw materials and semi-manufactured products, whether of animal, vegetable or mineral origin, in all countries.
- (2) Inquiries relating to the marketing of overseas products.
- (3) Detailed statistics of production, consumption and trade in all countries.
- (4) Questions concerning the normal uses of all raw materials and most semi-manufactured products and discussions concerning possible new or alternative uses.
- (5) Inquiries concerning the specifications as to qualities and types of raw materials necessary for various purposes.

- (6) Questions arising out of a desire to substitute one commodity for another.
- (7) Details of the methods employed in the cultivation of crops and the soil and conditions under which they have to be grown.
- (8) Details of the methods employed in mining, smelting and dressing minerals for the market.
- (9) Methods of processing and preparation for the market of animal and vegetable products ; particulars of machinery and equipment used for these purposes.
- (10) Details of the location and plant capacity of works at which smelting or refining or other processing is carried out.
- (11) Inquiries concerning the identity of products of all kinds and their suitability for use in industry.
- (12) Analysis and testing of samples of raw materials in the laboratories of the Institute.

The library of the Imperial Institute contains a large collection of Empire and foreign works of reference. It is regularly supplied with the more important reports and other publications of Government Departments in Great Britain, the Dominions, India, Burma, the Colonies, and many foreign countries, special attention being given to those relating to tropical agriculture, forestry, mineral resources and the production and utilisation of raw materials generally. The library not only functions as a source of information required by the technical staff of the Institute in dealing with investigations and inquiries, but it is also available to members of the public. Facilities are provided for officers of Government Departments of the Empire overseas and others to work here when preparing special reports. Over 2,220 books, official reports and pamphlets were added during 1943, and the library normally receives each year about 800 periodicals, amounting to some 25,000 individual issues. Owing to the present unsettled conditions, however, a number of current issues of foreign periodicals are no longer available. All important technical publications received in the library are indexed by the intelligence sections, so that the information contained therein is readily available to inquirers.

An important feature of the work of the Institute is the publication of its quarterly *Bulletin*, which publishes up-to-date scientific and technical information relating to the development of the raw materials of the Empire. The *Bulletin* contains :

Records of the principal scientific and technical investigations on plant, animal and mineral products conducted in the laboratories of the Imperial Institute for the Dominions, India and the Colonies, with a view to the utilisation of their natural resources.

Articles and notes relating to the production and commercial utilisation of raw materials of all kinds, and progress in tropical agriculture, forestry and the mineral industry.

Reports on current investigations conducted by Government technical departments overseas.

Bibliographies of literature on agriculture, forestry, mineral resources and vegetable insecticide materials.

Notices of recent books dealing with agricultural and mineral industries and the development of natural resources.

Finally, the Institute is responsible for the issue of monographs of a scientific and technical character, all bearing upon the object in view, namely, the development of Empire raw materials. The issue of these monographs has been held in suspense under war conditions, but will be resumed as soon as conditions are favourable. One of the most important of these publications is the annual Statistical Summary of the Mineral Industry of the British Empire and Foreign Countries—production, imports and exports—comparing the statistics of the year under review with the statistics of the two previous years.

To summarise—it will be recognised that as a technical intelligence bureau the Institute is not only engaged in collecting information from published sources and utilising such information in replying to inquiries received. It is also able to tap the experience of Dominion, Indian and Colonial experts, as well as scientists and technicians, industrialists and merchants in this country. Moreover, a large part of the information given is original in the sense that it has been ascertained by actual investigations carried on in our laboratories on specimens and consignments of economic products sent to us from all parts of the Empire.

The extent of our contacts with the Overseas Empire may be gathered from a perusal of Appendices A and B, summarising under the respective heads of our Plant and Animal Products Department and our Mineral Resources Department, firstly the countries which furnish us with scientific and technical publications relevant to our work, and secondly the various classes under which these publications are indexed. In Appendix C will be found listed the recipients of our Annual Report and Quarterly Bulletin. The receipts and issues in these three Appendices relate to the latest pre-war year, 1938. Appendix D comprises a list of our other publications of a scientific and technical character. It is impossible to give a list of the recipients of these publications; and it will suffice to say that they are widely distributed throughout the British Empire and are also on sale at the Institute and through recognised booksellers.

Appendix A

IMPERIAL INSTITUTE—Plant and Animal Products Department

Analysis by countries of publications indexed

I.—UNITED KINGDOM, DOMINIONS, INDIA AND BURMA

United Kingdom	..	..	..	..	..	..	207
Canada	..	..	..	..	..	..	90
Australia	..	..	..	..	..	..	67
New Zealand	..	..	..	..	..	..	19
Union of South Africa	..	..	..	..	..	..	19
Irish Free State	..	..	..	..	..	..	3
India	..	..	..	..	..	..	122
Burma	..	..	..	..	..	..	21
							548

II.—COLONIES AND PROTECTORATES

West Africa : Nigeria, Gold Coast, Sierra Leone, Gambia	33
East and Central Africa : Kenya, Uganda, Tanganyika, Somaliland, Zanzibar, Nyasaland, Northern Rhodesia, Southern Rhodesia, Anglo-Egyptian Sudan	50
Eastern : Ceylon, Mauritius, Seychelles, Malaya, Borneo, Sarawak, Hong Kong, Pacific Islands	79
Mediterranean : Cyprus, Malta, Palestine	12
West Indies, etc. : Windward Islands, Leeward Islands, Bahamas, Barbados, Jamaica, Trinidad, Bermuda, British Guiana, British Honduras	61
	235

III.—FOREIGN COUNTRIES

France	..	..	..	..	..	..	21
Germany	..	..	..	..	..	..	15
Italy	..	..	..	..	..	..	12
United States of America	..	..	..	..	..	..	131
U.S.S.R.	..	..	..	..	..	..	8
Other	..	..	..	..	..	..	139
							326

Total number of publications indexed	1,109
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Analysis by subjects of publications indexed

I.—GOVERNMENT REPORTS AND DEPARTMENTAL PUBLICATIONS

1. Administration reports : trade surveys, Empire development and technical research	269
2. Reports of Departments of Agriculture, experimental farms, botanical institutions, etc.	299
3. Reports on Soils and irrigation	16
4. Reports of Veterinary Departments and livestock research institutions	22
5. Reports of Departments of Forestry and timber research institutions	94
6. Reports on Fisheries and marine products	11
7. Miscellaneous	41
Total	752

II.—PERIODICALS AND JOURNALS

1. General subjects	31
2. Trade and commerce	74
3. General agriculture	76
4. Botany, etc.	19
5. Foodstuffs : sugar, rice, tea, coffee, cocoa, spices, etc.	26
6. Oils, fats, waxes, perfumes	11
7. Fibres : cotton, silk, paper, textiles, etc.	26
8. Rubber	17
9. Chemistry, drugs, dyes, etc.	29
10. Livestock and animal husbandry	6
11. Hides and skins, tanning, leather	10
12. Forestry and timber	12
13. Journals of scientific institutions	7
14. Miscellaneous	13
Total	357
GRAND TOTAL	1,109

Appendix B

IMPERIAL INSTITUTE—Mineral Resources Department

Analysis by countries of publications indexed

I.—UNITED KINGDOM, DOMINIONS, INDIA AND BURMA

United Kingdom	..	..	..	..	..	..	99
Canada	..	..	..	..	..	..	41
Australia	..	..	..	..	..	..	27
New Zealand	..	..	..	..	..	..	8
Union of South Africa	..	..	..	..	..	..	17
Eire	..	..	..	..	..	..	—
India	..	..	..	..	..	..	27
Burma	..	..	..	..	..	..	2

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II.—COLONIES AND PROTECTORATES

West Africa : Nigeria, Gold Coast, Sierra Leone, Gambia ..	16
East and Central Africa : Kenya, Uganda, Tanganyika, Somaliland, Zanzibar, Nyasaland, Northern Rhodesia, Southern Rhodesia, Anglo-Egyptian Sudan	32
Eastern : Ceylon, Mauritius, Seychelles, Malaya, Borneo, Sarawak, Hong Kong, Pacific Islands	16
Mediterranean : Cyprus, Malta, Palestine	9
West Indies, etc. : Windward Islands, Leeward Islands, Bahamas, Barbados, Jamaica, Trinidad, Bermuda, British Guiana, British Honduras	18

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III.—FOREIGN COUNTRIES

France	..	..	..	..	..	..	24
Germany	..	..	..	..	..	..	9
Italy	..	..	..	..	..	..	4
United States of America	..	..	..	..	..	..	44
U.S.S.R.	..	..	..	..	..	..	6
Other	..	..	..	..	..	..	55

142

Total number of publications indexed

454

Classified summary of publications indexed

1. Official reports on mineral resources, mining and geological surveys	131
2. Mining and metallurgy	35
3. Metals	17
4. Non-metals and building materials	17
5. Fuel	16
6. Chemical industries	17
7. Pure and applied science and engineering	39
8. Empire development	5
9. Commerce	71
10. Official gazettes	60
11. Miscellaneous	46
Total	454

Appendix C
List of Countries receiving Imperial Institute Quarterly Bulletin
and Annual Report

	<i>Bulletin</i>	<i>Annual Report</i> ¹
United Kingdom	638	839
Canada (including Newfoundland)	28	37
Australia	56	27
New Zealand	14	18
Union of South Africa	49	48
Eire	5	2
India	68	98
Burma	—	—
Nigeria	26	6
Gold Coast	11	7
Sierra Leone	7	3
Gambia	2	3
Kenya	13	10
Uganda	11	3
Tanganyika	17	4
Somaliland	1	—
Zanzibar	2	2
Nyasaland	9	3
Northern Rhodesia	4	2
Southern Rhodesia	5	4
Anglo-Egyptian Sudan	5	2
Ceylon	18	11
Mauritius	3	6
Seychelles	1	2
Malaya	—	—
Borneo	—	—
Sarawak	—	—
Hong Kong	—	—
Pacific Islands	1	2
Cyprus	4	5
Malta	7	5
Palestine (including Aden)	13	2
Windward Islands	5	2
Leeward Islands	6	3
Bahamas	1	1
Barbados	2	—
Jamaica	4	3
Trinidad	11	2
Bermuda	2	3
British Guiana	7	3
British Honduras	2	—
Falkland Islands	2	—
France (including French Colonies)	10	—
Germany	—	—
Italy	—	—
United States of America	64	9
U.S.S.R.	8	—
Other	90	1

¹ In addition, 70 copies are sent to the Department of Overseas Trade for distribution to the Department's overseas officers. Seventy copies are also sent to the Colonial Office for distribution to officers of the Colonial service abroad.

Appendix D

IMPERIAL INSTITUTE—Scientific and Technical Publications

Bulletin of the Imperial Institute. A record of progress relating to agricultural, mineral and other industries, with special reference to the utilisation of the raw materials of the Dominions, India and the Colonies. Issued quarterly. Price 2s. 6d. Annual subscription 10s., post free.

Annual Report on the work of the Imperial Institute. By the Director, to the Board of Governors. Gratis.

Publications on Plant and Animal Products

Descriptive List of Some Empire Timbers Recommended by the Imperial Institute Advisory Committee on Timbers. 1928. 2s.

Empire Timbers for Decorative and Building Work. 1931. 1s.

Grading Rules and Standard Sizes for Empire Hardwoods intended for Shipment to the United Kingdom. Second edition. 1937. 1s.

Commercial Plant Fibres (excluding Cotton) of the British Empire. A Guide to the Empire Fibres Exhibition held at the Imperial Institute, March–April, 1936. 3d.

Empire Fibres for Marine Cordage. Sisal Hemp and New Zealand Hemp. Rope Tests (Fourth series). 1932. 6d.

Empire Fibres for Marine Cordage. Tests of Tarred and Untarred Cordage made from East African Sisal. Report of Exposure Tests carried out by the Admiralty. 1935. 1s.

India (Sann or Sunn) Hemp: Its Production and Utilisation. 1930. 1s.

The Collection of Reptile Skins for Commercial Purposes, with reference to the Possibilities in Empire Countries. 1933. 1s.

The Drying of East African Hides, with reference to the Prevention of Blister. 1934. 2s.

The Preparation of Empire Hides and Skins. 1937. 3s. 6d.

A Survey of Insecticide Materials of Vegetable Origin (Nicotine, Derris, Lonchocarpus, Pyrethrum, Quassia, etc.). 1940. 3s. 6d.

The Tung Oil Industry of the United States. 1940. 1s.

The Storage of Foodstuffs in the Colonial Empire. 1940. 1s.

Chicle, Jelutong and Allied Materials. 1940. 1s.

War-time Drug Supplies. 1941. 1s.

The following publications are out of print, but copies may be consulted at the Imperial Institute:

Tanning Materials of the British Empire. 1929.

Empire-grown Sisal and its Importance to the Cordage Manufacturer. 1928.

Publications on Mineral Resources

Reports on the Mineral Industry of the British Empire and Foreign Countries:

Chrome Ore and Chromium. 1940. 2s. 6d.

Manganese. 1938. 3s. 6d.

Platinum and Allied Metals. 1936. 3s.

Strontium Minerals. 1937. 1s. 6d.

The following Reports in this series are out of print, but copies may be consulted at the Imperial Institute:

Abrasives 1929; *Aluminium and Bauxite* 1921; *Antimony* 1921; *Arsenic* 1920; *Asbestos* 1937; *Barium Minerals* 1913–19 and 1937; *Beryllium (Glucinum) and Beryl* 1931; *Bismuth* 1920; *Borates* (2nd Edition) 1933; *Bromine* 1928; *Cadmium* 1929; *China Clay (Kaolin)* 1931; *Coal, Coke and By-Products*, Part I, Gt. Britain 1921, Part II, Overseas Empire 1922, Part III, Foreign Countries 1922; *Cobalt* 1921; *Copper* 1922; *Diatomaceous Earth* 1928; *Felspar* 1920; *Fluorspar* 1921; *Fuller's Earth* 1920; *Gemstones* 1933; *Gold* 1922; *Graphite* 1923; *Gypsum* 1923; *Iodine* 1928; *Iron Ore Resources of the World* (Parts I to VIII) 1922; *Lead* (2nd Edition) 1933; *Lead Poisoning, Laws and Regulations* 1922; *Lithium* 1932; *Magnesium, Magnesite and Dolomite* 1939; *Mica* 1921; *Molybdenum* 1923; *Monazite* 1920; *Nickel* 1922; *Nitrates* 1920; *Petroleum*

1924; *Phosphates* 1921; *Quicksilver* 1922; *Salt* 1927; *Silver* 1923; *Sulphur and Iron Pyrites* 1922; *Talc* 1921; *Tantalum and Niobium* 1930; *Tungsten* 1921; *Vanadium* 1922; *Zinc* (2nd Edition) 1930.
Mining Royalties and Rents in the British Empire. 1936. 3s. 6d.
Government Assistance to the Empire Mining Industry. 1941. 1s. od.
The Mineral Position of the British Empire. 1937. 4s. od.
Statistical Summary of the Mineral Industry of the British Empire and Foreign Countries. 1933-35. 7s. 6d. Subsequent numbers are out of print, but copies may be consulted at the Imperial Institute. Copies of many back numbers of Statistical Summary from 1913 onwards may be obtained.

The following publications are out of print, but copies may be consulted at the Imperial Institute :

Monographs of Mineral Resources : *Antimony Ores, Bauxite and Aluminium, Bismuth Ores, Coal, Cobalt Ores, Copper Ores, Lead, Mercury Ores, Oil Shales, Potash, Silver Ores, Vanadium Ores.* (Dates of publication range from about 1920 to 1925).

The Mining Laws of the British Empire and of Foreign Countries :

Volume I Nigeria. 1920

II West Africa (The Gold Coast, Ashanti, The Northern Territories and Sierra Leone). 1920

III Part I. The Transvaal. 1922

III Part II. Swaziland. 1923

III Part III. Orange Free State. 1926

IV Part I. British Columbia. 1922

IV Part II. Ontario, Canada. 1928

IV Part III. Dominion of Canada. 1926

V Part I. New South Wales, Australia. 1929.

V Part II. Victoria, Australia. 1924.

VI British India. 1924.

VII Federated Malay States. 1924.

VIII Part I. East Africa (Tanganyika, Kenya, Nyasaland, Zanzibar) 1927

IX British Guiana. 1927.

X New Zealand. 1931

XI Newfoundland. 1930.

XII Northern Rhodesia. 1929.

The Imperial Agricultural Bureaux

By SIR DAVID CHADWICK, K.C.M.G., C.S.I., C.I.E.

Secretary to the Executive Council, Imperial Agricultural Bureaux

This is the general title of a group of twelve centres of information linked together, but each specialising in a particular branch of science in its application to agriculture, forestry, and a few aspects of public health or in the application of science to a particular branch of agriculture, e.g. dairying. They are controlled, administered and financed by the governments of the British Commonwealth of Nations acting jointly. Therefore, their contribution to the "Flow of World Information," if any, can justly be described as coming from the Empire.

But do they, in fact, make any such contribution? In 1942 the *Zeitschrift für Pflanzen Krankheiten* published an article by a German scientist, entitled "Post-war aims in regard to plant protection in Germany." It contained the following :

"The long felt need for an improvement in the German system of phytopathological abstracting will assume even greater prominence with the

extension of this line of study in the post-war period. It is intolerable that we should indefinitely be dependent in this respect on the English Reviews of Applied Mycology and Entomology."

Why any scientist should find the cheap and easy acquisition of knowledge a burden too grievous to be borne, I cannot say. This scientist's distress can hardly be due to disgust at the quality of the information in those journals. In 1940 Professor N. E. Stevens, Professor of Botany at the University of Illinois, and previously Senior Plant Pathologist in the Federal Department of Agriculture, U.S.A., in publishing the results of some of his research work, wrote :

"The figures are derived solely from the *Review of Applied Mycology*, which thoroughly covers the field of plant diseases and their control, and is held in high regard by all plant pathologists. This, of course, involves the possibility of error due to the changing interests of the abstractors, a supposition which seems exceedingly unlikely since the abstracts are made by professional abstractors and are of a very high order of excellence."

I am not concerned with the varying emotions which these, to a layman extremely unexciting, journals provoke, but this cry of agony and this generous appreciation are alike evidence that in some measure and in some degree these bureaux do contribute to the "Flow of World Information". On both grounds, therefore, a brief account of their activities and characteristics seems to be within the subject of this session.

They have developed slowly from small beginnings. In the first decade of this century interest in the Colonies in Tropical Africa was growing. The unhealthiness of Africa forced itself to notice—"The White Man's Grave," Sleeping Sickness, etc. From this interest sprang in 1908 the Sleeping Sickness Bureau, to be followed in 1909 by the Entomological Research Committee (Tropical Africa). As Dr. Shipley put it at that time :

"It would seem urgent, if we are to make our Central African Colonies habitable and profitable, and in a degree healthy, that increased attention should be paid to the insect fauna, whether it be inimical or helpful to man and, in the main, as the former play the larger part of the problem, I would begin with them."

The Committee was given £2,000 a year, half provided by the United Kingdom Treasury, half by the West African Colonies. With this sum the Committee was to send entomologists to Africa to collect and study insects injurious to crops, animals and man. These entomologists were to send the specimens they collected to London to the Secretary of the Committee, who was to secure their identification and who also was to keep the entomologists in the field supplied with all entomological information bearing on their work. As departments grew the appointment of entomologists soon became the function of the various local administrations. Assistance in identification still continues, and that work has increased ; but the big development has been as a centre of information in Applied Entomology. Canada played a large part in that development. If a general centre for information on Applied Entomology were formed, Canada would help in meeting the cost. Other Empire governments joined in. In 1913 this Committee was converted into the Imperial Bureau of Entomology, and the first number of the *Review of Applied Entomology* was issued. Entomology was thus the first of this group of twelve.

About the same time the older Committee, that on Sleeping Sickness, was undergoing a somewhat similar change into the Bureau of Tropical Diseases, to be still later developed into the Bureau of Hygiene and Tropical Diseases. It has continued its separate existence intimately associated with the Colonial Office.

The next Bureau on the agricultural side was that of Mycology in 1922. Others were added on the recommendations of the Imperial Agricultural

Research Conference of 1927 and of the British Commonwealth Scientific Conference of 1936.

Conformably with the changes in the constitutional relations between the countries composing the British Commonwealth the form of control over these bureaux has changed. Instead of a United Kingdom Department, the Colonial Office, supervising their administration as a trustee for such governments as wished to contribute, the governments themselves jointly control their work and provide their finance. The governments agree between themselves on the general type of work the bureaux are to do, on the finance required for such work and on the proportions in which the several governments provide it. The day-to-day administration is entrusted to an Executive Council to which each government, the Colonial Empire being taken as one, appoints its own representative. The work of the bureaux and of the Council are examined by representative Conferences called at periods of a few years. Those Conferences also make recommendations to the governments on the finance needed in the ensuing years, on any extensions, or curtailments of the bureaux and on any changes in the scope of their work or their methods. The bureaux have thus become a truly intra imperial service. The subjects at present dealt with by the bureaux are :

Entomology	Animal Nutrition (includes Human)	Horticulture and Plantation Crops
Mycology	Animal Genetics	Agricultural Parasitology (Helminthology)
Soil Science	Plant Genetics	Dairy Science
Animal Health	Pastures and Forage Crops	Forestry

These several bureaux do not work as isolated or unrelated units. They follow much the same general plan, and supplement and co-operate with each other. But each is directed towards meeting the special requirements of a fairly clearly defined group of scientists. Each bureau has thus a definite objective, a fairly defined clientèle and an identity of interests with those it is primarily designed to serve. Each bureau is located at, but is not a portion of, a research institute which those interested in its subject are wont to visit. The bureau officers have thus opportunities of meeting those engaged in research in their subjects and of being in touch with the living current of thought in their subjects.

A bureau is to be a genuine centre of information. Its function is not restricted to the issue of publications ; though its abstract journal and its reviews of information on particular subjects are the regular means by which it keeps in touch with most of its clients. The Empire countries, which provide the basic funds, receive free copies of such journals as they wish up to a published value which bears an agreed proportion to their annual contributions. Thereafter the various publications are on sale. Over and above this free official distribution there are many subscribers in all the Empire countries. In the years of peace there was hardly a country in the world without subscribers to one or several of these journals. Iceland, Chili, Thailand, Manchukuo, the Congo, Haiti, all were entered on the subscribers' list. The foreign countries with the largest numbers of subscribers were in this order, the United States, the Soviet Union, Japan, Germany, France and Italy.

It is a subsidised service designed to meet the needs of the scientists in Empire countries in the various groups into which they have coalesced in applying science and scientific research to the improvement and management of crops, livestock, forestry and nutrition, including human. The progressive application of the natural sciences to these objects is an activity sufficiently large and distinct to be the concern of a service of information organised for that purpose. The bureaux have other functions to perform besides the issue of publications already mentioned. But to discharge those functions as well as to prepare their publications they have to be in touch with research in their

subjects in all countries of the world. As illustrated earlier, scientists in foreign countries have spoken generously of the work of the bureaux; on their side the bureaux are under a deep obligation to many of those foreign scientists for generous help, advice and information on a multitude of occasions.

In the vast and varied field of information the bureaux touch only a small and specialised section. It is not suggested that their methods and form of organisation are suited to other sections or satisfy all needs in their own section, but, inasmuch as they are an Empire activity and do promote the Flow of Information, in one small section of knowledge, it is hoped that this account of their growth is not without interest.

The Bureau of Hygiene and Tropical Diseases

By R. L. SHEPPARD

Secretary to the Bureau

The origin of the Bureau of Hygiene and Tropical Diseases is to be found in a Draft Convention prepared by representatives of the European powers attending an International Conference on Sleeping Sickness at the Foreign Office in London in 1907. This Draft Convention embodied a proposal that a Central International Bureau should be established in London to collect and disseminate information respecting Sleeping Sickness, a disease which menaced the populations of large areas of tropical Africa. The proposal for an International Bureau fell through, but His Majesty's Government established instead a National Bureau to serve as far as possible the same purpose. The Sleeping Sickness Bureau began its work on June 1st, 1908, in a room at the Royal Society. In 1912 this Bureau, re-named the Tropical Diseases Bureau, and housed at the Imperial Institute, was expanded on an inter-Imperial basis, to collect and distribute information on tropical diseases generally, including the diseases of animals. In 1926 the Bureau's functions were further extended to cover all branches of public health and preventive medicine with particular regard to the needs of Britain overseas, and its name was changed to the Bureau of Hygiene and Tropical Diseases.

The Bureau is under the general control and direction of an Honorary Managing Committee appointed by and responsible to the Secretary of State for the Colonies. This Managing Committee, which normally meets twice yearly, under the Chairmanship of the Chief Medical Adviser to the Secretary of State for the Colonies, includes representatives of the Colonial and India Offices, and of the Ministries of Health, Agriculture, and Labour and National Service, also representatives nominated by the Royal Society, the Medical Research Council and the London School of Hygiene and Tropical Medicine, and a few individual members nominated by the Secretary of State for the Colonies.

The day-to-day management is entrusted to the Director—a whole-time officer with medical qualifications and overseas experience gained in the Colonial Medical Service.

The Bureau acts as a clearing house for the rapid dissemination of the results of medical experience and research in their bearing on problems of public health and of tropical diseases. Its functions are performed mainly through its publications:

- (1) The *Tropical Diseases Bulletin*, published from 1912, consisting of a collection of abstracts and of special review articles on all tropical diseases, and the only comprehensive reviewing periodical in the world in this field of science.
- (2) The *Bulletin of Hygiene*, published from 1926, containing abstracts of published papers, and review articles written by experts, covering the whole field of public health activities, not confining the survey to problems

of tropical countries, but dealing also with problems present in the Dominions and Homeland. It is the only comprehensive reviewing periodical in this field except for the German *Zentralblatt für die gesamte Hygiene*.

In 1940 the Bureau undertook the editorship for the Medical Research Council of a periodical *Bulletin of War Medicine*, which presents to the medical men of the armed forces and of the emergency medical services to the Dominions and to the Allies, a comprehensive and succinct account of the advances made in medical science in relation to war.

In the selection of significant papers for notice in these three *Bulletins* the Bureau searches some 650 of the more important English and foreign medical and scientific periodicals, besides watching epitomes of literature in foreign journals and titles of papers listed in the *Quarterly Cumulative Index Medicus* and similar bibliographical compilations.

The abstracting of the papers is done by a panel of over 200 expert contributors, mostly men and women of international reputation, specially associated with research on the subjects they review, and thus able, from their personal knowledge of developments in their own particular subjects, to indicate for readers the implications of this growing knowledge.

The Bureau is also helped in its survey by contacts with other Bureaux serving interests touching on its own, and by co-operative exchanges of abstracts with organisations in this country and in America.

The Bureau is careful to maintain an international outlook in its abstracts, giving equal prominence to worth-while work whether British or foreign.

No arbitrary limit of length is fixed for the abstracts, which are kept as brief as is compatible with a just estimate of the work to be described and with ease of assimilation by readers, many of whom are working in the colonial field without ready access to the original papers. Thus the main object of the *Bulletins* is to obviate the possibility of medical workers at a distance losing touch with the main stream of scientific progress at home and abroad.

As a centre for the interchange of medical information the Bureau, from its compilation of records going back over a number of years, has been able to supply information of direct war importance to the fighting services and other bodies, in addition to answering enquiries on tropical diseases and public health matters which are constantly received. In preparation for the immediate post-war period its help is also being drawn upon by UNRRA and other international organisations.

The Bureau is housed at the London School of Hygiene and Tropical Medicine, and the original publications from which the abstracts for its *Bulletins* have been prepared are preserved in the School Library, where they form a valuable reference collection.

The Library of the Royal Empire Society in 1944

By EVANS LEWIN, M.B.E., F.L.A.

Librarian of the Royal Empire Society

The Library of the Royal Empire Society now contains some 240,000 books, pamphlets, and reports, including about 94,000 bound volumes. About 35,000 volumes were destroyed by enemy action, including the library of overseas law, books on foreign colonies, and long sets of the proceedings of learned and scientific societies. The large residuum mentioned above is the finest collection of material relating to the Dominions, Colonies, and India.

By permission of the Council, the library is open for the use of students and enquirers, who are permitted to use books in the library but not to borrow them.

The library covers all aspects of the overseas British Empire, especially its history, economics, sociology, agriculture, geology and mining, botany, ethnology and administration. A special feature is the large collection of official publications and reports, such as the administrative reports of the

various government departments ; the reports on agriculture, forestry, mining, census, education, native races, trade and commerce, finance, local government, public works, railways, and other subjects ; and long sets of imperial official publications. Among the last are sets of the Blue Books of the various colonies, many going back as early as the beginning of the nineteenth century.

The official reports of the various Dominions and their states and provinces ; the Colonies ; and India ; and long sets of the various official gazettes, in are many cases almost complete back to mid-Victorian times.

The following is a list of some of the publications in the library which are likely to be of value to enquirers on technical subjects. There are, of course, many other periodical publications of a similar character as well as periodicals dealing with the history, economics, and geography of the overseas empire.

Before the present war some 900 different periodical publications were received regularly and were filed for reference.

There is a printed subject-catalogue of the library in four volumes (1930-37) and the whole of the library is also catalogued upon cards. Numerous printed bibliographies have been issued, such as No. 9 (1943), Africa, south of the Sahara ; No. 10 (1943), Best books on the British Empire ; and No. 11 (1944), The Pacific Region.

The library is ordinarily open from 10 a.m. to 6 p.m. every day, except Sunday. Books may be borrowed through the agency of the National Central Library, except such as are retained for reference purposes. Fellows of the Society may borrow books.

Owing to war conditions and damage due to enemy action much of the work of the library has necessarily been curtailed but every endeavour is made to supply the material or information required.

Select list of periodical publications received in the Library

GENERAL

Annals of the Missouri Botanical Gardens
Annals of Tropical Medicine
Bulletin of Entomological Research
Bulletin of the Imperial Institute
Economic Journal
Empire Cotton Growing Review
Empire Journal of Experimental Agriculture
Empire Survey Review
Journal of the Institute of Petroleum
Journal of the Royal Aeronautical Society
Journal of the Royal Statistical Society
Mining Magazine
Review of Applied Entomology
Review of Applied Mycology
Tropical Agriculture
Tropical Agriculturist (Ceylon)
Tropical Diseases Bulletin
Reports of the various Chambers of Commerce in Great Britain and overseas

AUSTRALIA

Official and administrative papers and reports of the Commonwealth and its States : Parliamentary Debates
Agricultural journals of the various states
Australian Forestry Journal
Australian Sugar Journal
Economic Record
Geological Bulletins and Records of the various States
Publications of the various Royal Societies (such as were not destroyed)
Council for Scientific and Industrial Research : Journal, Bulletin, Reports, and Pamphlets

BRITISH MALAYA

Official administrative papers and reports of the Straits Settlements, Federated Malay States, and the various Malayan States
Gardens Bulletin
Malayan Agricultural Journal
Rubber Research Institute of Malaya : Journal

CANADA

Official administrative papers and reports of most of the Provinces (and of the Dominion until recent years) : Parliamentary Debates
British Columbia Mines Bureau : Reports
Canadian Entomologist
Canadian Geological Survey : Publications
Canadian Forestry Branch : Reports
Canadian Journal of Economics
Canadian Mining and Metallurgical Bulletin
Canadian Mining Journal
McGill University : Publications
Ontario Mines Department : Reports

CEYLON

Official and administrative papers and reports
Ceylon Journal of Science (various sections on botany, zoology, fisheries, etc.)
Royal Botanic Gardens : Annals

INDIA AND BURMA

Reports of the various Departments and Provincial and State Reports
Reports of Indian Commissions : Council Debates, etc
Agricultural Research Institute : Bulletins and Leaflets
Asiatic Society of Bengal : Memoirs
Burma Research Society : Journal
Calcutta Botanic Gardens : Publications
Central Provinces Agricultural Department : Bulletin
Indian Forest Department : Bulletins, Memoirs, Pamphlets, and Records
Indian Gazetteers of Provinces and States
Indian Journal of Agricultural Science
Indian Journal of Economics
Indian Geological Survey : Memoirs, Records, Reports, Palaeontologica Indica
Indian Board of Scientific Research : Reports
Indian Tariff Board : Reports
Indian Central Cotton Committee : Technological Bulletin and other publications
Indian Railway Department : Technical Papers
Indian Agricultural Department : Memoirs
London Shellac Research Bureau : Reports and Technical Papers
Madras Agricultural Department : Bulletin
Madras Fisheries Bureau : Reports, Bulletins
Mysore Agricultural Department : Bulletin
Mysore Information Bulletins
Royal Asiatic Society, Bombay Branch : Memoirs
United Provinces : Land Records and Agricultural Department Bulletins

NEW ZEALAND

Official administrative papers and reports : Parliamentary Debates
New Zealand Agricultural Department : Journal of Agriculture
New Zealand Geological Survey : Reports and Bulletins
New Zealand Institute : Publications
New Zealand Journal of Science and Technology
Polynesian Society : Journal

SOUTH AFRICA

Official administrative papers and reports of the Union and its Provinces
Journal of the Chemical, Metallurgical, and Mining Society of South Africa
South African Journal of Economics
South African Journal of Science
South African Sugar Journal
South African Railways and Harbours Magazine

CROWN COLONIES

Official administrative papers and reports of the various colonies
Blue Books of the various colonies
Crown Colonist
Debates in the Legislatures

Sources of Canadian Bibliographical Information

[Mr. Charles R. Sanderson, Chief Librarian of the Public Library of Toronto, while expressing regret that pressure of work made it impossible for him to contribute a paper, very kindly sent the present list.]

The King's Printers publish lists of the publications of the Dominion and of each province. King's Printers are as follows :

Edmond Cloutier, Ottawa, Canada.
A. Shnitka, Edmonton, Alta.
C. F. Banfield, Victoria, B.C.
J. L. Cowie, Winnipeg, Man.
Geo. M. Byron, Fredericton, N.B.
(No name given), Halifax, N.S.
T. E. Bowman, Toronto, Ont.
Frank L. Dillon, Charlottetown, P.E.I.
Redempti Paradis, Quebec, Que.
T. McConica, Regina, Sask.

Acadia University, Wolfville Library. Eric R. Dennis collection.

A catalogue of the Eric R. Dennis collection of Canadiana in the library of
Acadia University. 212 p.
Wolfville, N.S. the University, 1938.

A bibliography of current publications on Canadian Economics, prepared by
the Editorial Office of the University of Toronto Press.

Toronto, University of Toronto Press.

Published quarterly in *The Canadian Journal of Economic and Political Science*.

British Columbia. Public Library Commission.

Catalogue of books on Canada, Newfoundland and Labrador. 24 p.

Victoria, B.C., Public Library Commission, Open Shelf Division, Parliament
Buildings, 1942.

Canada. Department of Public Printing and Stationery.

Catalogue of official publications of the Parliament and Government of
Canada, June, 1943. 140 p.

Ottawa, King's Printer, 1943. 25 cents.

Published annually.

Canada. National Film Board.

16mm. films, 1941-42. 100 p.

Ottawa, National Film Board, 1942.

Yearly supplements keep this up to date.

Canada. Parliament. Library.

Catalogue of the Library of Parliament. 2 v.

Ottawa, King's Printer, 1879-80.

Annual supplements keep this up to date.

Canada. Public Archives.

Catalogue of pamphlets in the Public Archives of Canada, with index ; prepared by Magdalen Casey. 2 v. (Pub. 13).

Ottawa, King's Printer, 1931-2. \$1 each.

Vol. 1. 1493-1877.

Vol. 2. 1878-1931.

Canadian Periodical Index.

Toronto, Ontario Department of Education. Public Libraries Branch.

Published in the quarterly issues of *Ontario Library Review*, with an annual cumulation.

Cole, Arthur Harrison, ed.

A finding list of Royal Commission Reports in the British Dominions ; prepared under the direction of Arthur Harrison Cole, with an introductory essay by Hugh McDowell Clokie. 134 p.

Cambridge, Mass. Harvard University Press, 1939. \$1.50.

Gregory, Winifred, ed.

Union list of serials in libraries of the United States and Canada : 2nd ed. 3065 p.

N.Y. H. W. Wilson, 1943.

Price on application.

Gregory, Winifred, ed.

List of serial publications of foreign governments, 1815-1931. x. 720 p.

N.Y. H. W. Wilson, 1932.

Price on application.

Includes Canadian publications.

Gregory, Winifred, ed.

American newspapers, 1821-1936 ; a union list of files available in the United States and Canada ; under the auspices of the Bibliographical Society of America. xxii. 807 p.

N.Y. H. W. Wilson, 1937.

Price on application.

Higgins, Marion Villiers.

Canadian Government Publications ; a manual for librarians ; with an introduction by Gerhard R. Lomer. ix. 582 p.

Chicago, American Library Association, 1935. \$2.25 paper. Planographed.

Letters in Canada.

Toronto, University of Toronto Press.

Published annually in *University of Toronto Quarterly*.

Library of Congress. Division of Bibliography.

Canada ; a selected list of recent books and pamphlets. 145 p.

Washington, Library of Congress, 1941.

McKim, A., Limited.

McKim's Directory of Canadian Publications, 35th ed., 1942 ; a complete list of the newspapers and periodicals published in the Dominion of Canada and Newfoundland, with full particulars. 483 p.

Montreal, McKim, 1942. \$3.

New editions brought out at intervals.

Maggs Bros., London.

Canada, Newfoundland, Labrador, and the Canadian Arctic ; a selection of six hundred and fifty books, with forty-four illustrations. (Catalogue No. 678). 122 p.

London, Maggs, 1939.

Ontario Library Review.

Toronto, Public Libraries Branch, Ontario Department of Education.

Published quarterly, contains helpful bibliographies, lists of government publications and the Canadian periodical index.

Queen's University. Library.

Canadiana, 1698-1900, in the possession of the Douglas Library. 86 p.

Kingston, the University, 1932.

Recent publications relating to Canada.

Prepared by the Editorial Office of the University of Toronto Press.

Toronto, University of Toronto Press.

Published quarterly in the *Canadian Historical Review*.

Société des Ecrivains canadiens.

Bulletin Bibliographique.

Montreal, 1937.

Annual list of French-Canadian publications.

Toronto. Public Libraries.

A Bibliography of Canadiana ; being items in the Public Library of Toronto, Canada, relating to the early history and development of Canada. 828 p.

Toronto, Public Libraries, 1934.

Covers period 1534-1867.

Toronto. Public Libraries.

The Canadian catalogue of books published in Canada, about Canada, as well as those written by Canadians.

Toronto, Public Libraries, 1923. 50 cents.

Published annually since 1923.

Weston, Sydney M.

Publications of the Government of British Columbia, 1871-1937 ; a checklist. (Provincial Library and Archives). 167 p.

Victoria, King's Printer, 1939.

The Flow of Information between Britain and Australia

By KENNETH BINNS, F.L.A.

Librarian, Commonwealth National Library, Canberra

The problem of improving the flow of information within the Empire, like the political problem confronting the British Commonwealth, is many sided. I shall limit my observations to the problem as it affects the British Isles and Australia.

There is no dearth of published material on British life and thought and, in normal times, no barrier to its distribution throughout Australia. Such taxes as have been imposed were very temporary depression measures not likely to be renewed, even in similar circumstances. The exchange rate which, of course, affects the capacity of individuals and some Institutions to acquire publications is governed by general economic policy but, even so, is more favourable to British than to American publications, for example. Moreover, the inclination of both individuals and Institutions has been to seek their ideas and information almost exclusively from Britain, though the impact of America on this country during the war has inevitably modified this tendency. One factor which will facilitate the continued flow of British publications is their substantially lower cost, which is expected to continue after the war. Associations, such as your own, along with the British Council, the National Book Council and other bodies, have done much to make British publications more widely known in Australia, thus reinforcing the wise and generous policy of your Government in popularising and freely distributing the publications of His Majesty's Stationery Office. If these practices are continued and developed they will ensure that British publications are available to satisfy the rapidly growing demand of Australia for ideas and information from abroad.

Our Libraries are aware of the need for pooling our limited book resources by interlibrary lending, the inspiration for which we owe largely to the English

system unified by the National Central Library and supported by so many of the special libraries from which your own membership is drawn. We are also aware of the importance of Union Catalogues. A second edition of *Pitt's Catalogue of the Scientific and Technical Periodicals in the Libraries of Australia* is in preparation, and the National Library is planning a similar work in the Social Sciences as an essential contribution to reconstruction planning.

No organisation of our resources, however, can make us independent of the vast accumulation of published and unpublished materials which have been gathered into the British Isles through the centuries. Only with the sympathetic co-operation of British Librarians and Custodians can we hope to bridge this gap both in our current information and our early history, and in much that lies between. So far, distance has made it impossible for us to enter the international lending system and, though post-war transport facilities may alter this, we shall probably achieve most by the wise use of documentary reproduction. The National Library had some experience of the kind of co-operation which we might expect in such undertakings when, in the difficult days just before the war, it had completed arrangements with the Secretary of the Public Record Office and the Library of Congress unit operating there to copy on microfilm those records of the Colonial Office which are the source materials for Australian history. We hope that the time is not far distant when it will be possible for us to resume this project and others.

But the flow of information should not be in one direction only. For reasons that were adequate in the past the story of Australian achievement has been little known in the British Isles, but there are already indications that British people will wish to know more about us in the future, and we are actively planning to meet these demands.

The output of published material on Australia has grown steadily during the last decade and may be expected to increase rapidly when paper and man-power restrictions are lifted. The Commonwealth Government has encouraged these developments in a number of ways, notably through its National Library and the Commonwealth Literary Fund. The Fund grants Fellowships for research and imaginative writing, assists in publishing the results, and has lately sponsored the reprinting of a large series of important Australian works. The Library Committee has shown a special interest in Australian history through the publication of the *Historical Records of Australia*, the resumption of which will be linked with the microfilm project for the copying of Australian Records in London. More recently the Government has adopted extensive plans for the history of Australia in the war, both at home and on the battlefronts, and linked with this is a scheme for the housing and administration of the Archives of the Commonwealth by two archival authorities, The National Library and The Australian War Memorial.

The obligation to make known what has been published is generally recognised in Australia, and there is progress to report in bibliography. The National Library has issued annually, since 1936, a fairly complete list of publications appearing in the Commonwealth or touching Australia, though official publications have been temporarily omitted for various reasons during the war. Its *Select List of Representative Works dealing with Australia* and issued annually since 1934 is a selection of about one hundred books and official publications, wherever published, giving an up-to-date and authentic picture of Australian life and achievement. Both of these publications are freely available to overseas libraries and institutions on an exchange basis. Another useful bibliographical aid appearing regularly is *Australian Science Abstracts* published by the Australian National Research Council, and it is likely that an Australian Bibliography and abstracts in the Social Sciences will soon appear. A list is appended to show what Bibliographies have appeared in various subject fields. It has been compiled by my assistant librarian, Mr. H. L. White, and while not claiming that it is exhaustive, it is certainly the most comprehensive one yet attempted.

The final obligation to ensure the wide distribution of material published is

also clearly understood. Australian publishers have never found the British Isles a very ready market for their books, but the march of events may change this. Australian Societies, Institutions, Government Departments and Libraries have encouraged the exchange of their publications and are always willing to develop these further. But what may prove to be the most significant step towards making known to Britain what is being thought and written in Australia was the establishment, at Australia House this year, of an Australian Library of Information as an activity of the National Library at Canberra. This was not an original idea. The British Library of Information in New York and the American Library of Information in London provided the original inspiration, but it is hoped that librarians, students, journalists, teachers and men of affairs will all find there their best introduction to the record of Australian achievement. If used to the full as it develops this library might do more to improve the flow of information between Australia and Britain than, with the best will in the world, we have been able to do through the years at a distance of twelve thousand miles.

LIST OF CATALOGUES AND BIBLIOGRAPHIES COVERING WORKS ABOUT AUSTRALIA AND BOOKS PUBLISHED IN AUSTRALIA. COMPILED BY MR. H. L. WHITE, M.A., ASSISTANT LIBRARIAN, COMMONWEALTH NATIONAL LIBRARY.

Australia.—Commonwealth National Library.

Annual Catalogue of Australian publications, No. 1, 1936 to date. (Government Printer), Canberra, 1937.

Catalogue of the books, pamphlets, pictures, and maps in the Library of Parliament to September, 1911. (Acting Government Printer), Melbourne, 1911.

Select list of representative works dealing with Australia, 1934 to date. (Government Printer), Canberra, 1935.

Select Bibliography on Industrial Conciliation and Arbitration, with special reference to Australia and New Zealand. (Government Printer), Canberra, 1929.

Ferguson, J. A.—Bibliography of Australia. Vol. 1. 1784–1830. (Angus & Robertson), Sydney, 1941.

Foxcroft, A. B., compiler.—The Australian Catalogue: a reference index to the works and periodicals published and still current in the Commonwealth of Australia. (Whitcombe & Tombs), Melbourne, 1911.

Gill, T., compiler.—Bibliography of South Australia. (Government Printer), Adelaide, 1886.

Bibliography of the Northern Territory of South Australia. (Hussey & Gillingham), Adelaide, [1903].

Continued in List of Books, etc., in the Public Library of South Australia, relating to the Northern Territory: continuing Thomas Gill's Bibliography (1903) to December, 1933 [with] Supplement, 1934–8. Compiled by C. H. Hannaford. (Public Library), [Adelaide, 1934–8].

Miller, E. Morris.—Australian literature from its beginnings to 1935: a descriptive and bibliographical survey of books by Australian authors in poetry, drama, fiction, criticism and anthology, with subsidiary entries to 1938. (Melbourne University Press), Melbourne, 2v., 1940.

Musgrave, A., compiler.—Bibliography of Australian Entomology, 1775–1930: with biographical notes on authors and collectors. (Royal Zoological Society of N.S.W.), Sydney, 1932.

New South Wales. Public Library.—Australasian bibliography: catalogue of books in the free public library, Sydney, relating to or published in Australasia: authors, editors, or reference, 1869–1885. (Government Printer), Sydney, 1893.

- New South Wales. Public Library : Mitchell Foundation.—Bibliography of Captain James Cook, R.N., R.F.S., circumnavigator : comprising the collections in the Mitchell Library and General Reference Library, the private collections of William Dixon, Esq., and J. A. Ferguson, Esq., and items of special interest in the National Library, Canberra, the Australasian Pioneers' Club, Sydney, and in the collection of the Kurnell Trust. (Government Printer), Sydney, 1928.
- Cambridge History of the British Empire. Vol. 7, part 1, Australia : [ed.] Ernest Scott. (Cambridge University Press), Cambridge, 1933.
- Petherick, E. A., *ed.*—Edwards' Australasian Catalogue : catalogue of books relating to Australasia, Malaysia, Polynesia, the Pacific Coast of America, and the South Seas. (Francis Edwards), London, 1899.
- Petherick, E. A., *ed.*—Catalogue of the York Gate Library formed by S. William Silver : an index to the literature of geography, maritime and inland discovery, commerce and colonisation. 2nd edition. London, 1886.
- Serle, P., compiler.—Bibliography of Australasian poetry and verse : Australia and New Zealand. (Melbourne University Press), Melbourne, 1925.
- Steere, F. L., compiler. Bibliography of books, articles, pamphlets, etc., dealing with Western Australia, issued since its discovery in 1616. (Government Printer), Perth, 1923.
- Victoria. Public Library, Museums, and National Gallery.—Classified catalogue of Australiana in the Public Lending Library of Victoria [compiled] by T. Fleming Cooke. (The Trustees), Melbourne, 1936.

Notes on Library and Information Services available in Australia

By GUY B. GRESFORD

of the Australian Scientific Research Liaison Office, London

As in most other countries, the war has seen a tremendous expansion of scientific and technical research in Australia. Whereas at one time it was considered that Australia should confine itself to primary industries, secondary manufacturing industries are now established on a flourishing scale and the most complicated industrial processes are carried out. This change-over has meant a large expansion in research facilities and as a corollary of this an increase in information and library services. Some of the facilities available, both for primary and secondary industries are briefly dealt with in this note.

Each state of the Commonwealth is provided with a public reference library in the capital city, and there are also public libraries in some of the larger provincial towns. These vary considerably in scope and size, but in all cases provide general reference facilities on technical subjects. In South Australia the public library in Adelaide has been particularly enterprising since the war began in providing for manufacturers or other people requiring technical information. It has appointed liaison officers whose duty it has been to maintain contact with industry and provide it with whatever assistance is available for its problems from the library's facilities. The public library of New South Wales, which for twenty-five years has maintained a Research Department, is equipped to supply microfilm copies or positive prints of any material in its collection. The National Library at Canberra, though strongest in the social sciences, has a considerable collection in the pure and applied sciences, especially of material of Australian interest or published by Australian or overseas government departments.

The universities, of which there is one in each state, maintain general and departmental libraries to which access may be obtained by the public. The Council for Scientific and Industrial Research has a large central library at its headquarters in Melbourne and divisional libraries at other centres of its activity, mainly Canberra, Sydney, and Adelaide. Other Commonwealth Government scientific institutions with library facilities are the Munitions Supply Laboratories, the Commonwealth Serum Laboratories, the Commonwealth Meteorological Bureau, the P.M.G. Laboratories, all in Melbourne, the Institute of Anatomy, the Patents Office, and the Commonwealth Forestry Bureau at Canberra, and the School of Health and Tropical Medicine at Sydney.

Various State Government Departments, especially those of Agriculture, of Mines (usually including Geological Survey) and of Public Works also have specialised collections of varying importance. In addition, the resources and facilities of such organisations as the State Electricity Commission of Victoria, the Australian Museum in Sydney and some of the principal technical colleges should not be overlooked. Some of the larger industrial undertakings in Australia are also well equipped with libraries.

Australia is not rich in privately endowed research institutions; there are three major foundations of this kind, however, which should be remembered in considering library facilities. These are the Waite Institute for Agricultural Research near Adelaide, the Walter and Eliza Hall Institute for Medical Research in Melbourne, and the Kanematsu Institute of Pathology attached to the Sydney Hospital. All the public libraries, as well as those belonging to governmental and private research institutes and some of those of the larger companies, participate in the Inter Library Loan Service.

These cover the main sources of technical books and periodicals available in Australia. No account of these however would be complete without reference to Pitt's "Catalogue of Scientific and Technical Periodicals in Australian Libraries." This invaluable survey of technical journals available in Australia was first published in 1930 and supplements have been added in 1932 and 1934. Work on a new edition is in progress at present.

Turning from straight out library facilities to information services, mention should be made in the first place of the Scientific Liaison Bureau which was set up in 1942 by the Commonwealth Government. The object of this organisation is to bridge the gap between a problem and the scientist who is capable of solving it. Though many people may be aware of existing problems they often do not know the right scientific quarter to which to turn for assistance, and it is to provide this information that the S.L.B. was set up. Its operations so far have met with great success, although during the war it is primarily concerned with finding solutions to problems encountered in the Services. It has also proved invaluable in helping manufacturers engaged in war-time industry. Besides referring enquirers to laboratories and research institutions throughout the Commonwealth it maintains close contact with all libraries mentioned above.

In addition to the Scientific Liaison Bureau, which is quite a separate organisation, the C.S.I.R. maintains an Information Section expressly for the purpose of supplying technical information to bona fide enquirers. This Section is housed with the C.S.I.R. Headquarters Library, and in addition to supplying information from the literature it is enabled, by means of its liaison offices in London and Washington, to obtain latest information on technical subjects from overseas. An important service performed by it at present is the foreign journal service. The liaison office in London is able to procure microfilm copies of foreign journals entering Great Britain by various means, and these are sent to Australia, which is thus enabled to maintain some continuity regarding foreign publications which by other means would, of course, be quite unobtainable. Some of the film copies sent to Australia are procured from the Aslib Microfilm Service, while others are made with the office's own copying unit.

It will be seen that on the whole Australia is, considering war-time conditions

reasonably provided with scientific reference facilities. The very poor mail service which exists, during the war, between this country and Australia means that all English journals arrive in the country very late, the position in this respect being in sharp contrast to that of American journals. There has been, too, a growing tendency for the use of American text books in Australia since, in many cases, these are more readily available, though it would create a wrong impression if it were stated that a preference is shown for American text books. The price of all text books in Australia is exceedingly high, which is a great drawback to the student. Some of the learned societies in Australia publish their own journals with great success, but there are two schools of thought on the subject. One maintains that every effort should be made to encourage Australian authors to publish accounts of their researches in Australian journals, the other that the number of journals should be cut down and Australians should publish overseas. War-time difficulties and an increase in the stature of Australian research have favoured the former school. The position after the war remains to be seen, though on the whole it seems more likely that the position of Australian journals will continue to improve.

Notes on the Organisation of Scientific Research in New Zealand

By A. L. POOLE

of the London Scientific Liaison Office, New Zealand D.S.I.R.

The following notes, while not pretending to be in any way complete, aim to give a very general picture of scientific research in New Zealand.

As in Britain, research is carried out by a specially created Scientific Department, other Government Departments, a Medical Research Council, the Universities, endowed institutes and industrial laboratories. But by far the greatest amount of research in the Dominion comes under the direction of the Council of the Department of Scientific and Industrial Research.

(1) THE NEW ZEALAND DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH on its creation in 1928 took over the Dominion permanent scientific services including the Meteorological Office, the Dominion Laboratory (Chemical), Geological Survey, and the Observatories. It also absorbed certain research proceeding under other Government Departments.

The newly formed Department then proceeded to set up divisions to cover many lines of research then inadequately covered, and to expand research in the Scientific services taken over. It had, and continues to have, a decided agricultural bias, as it covers research which comes under the Agricultural Research Council in this country. During the war, however, great impetus has been given to chemical and physical research in connection with newly developed war-time industries, and after the war much more industrial research will be implemented.

The construction of the New Zealand D.S.I.R. at present is somewhat as follows :

(a) Permanent Scientific Services

Meteorological Branch
Geological Survey
Dominion Laboratory
Observatories
Physical Laboratory

(b) *Other Research Organisations*

Plant Research Bureau, consisting of :

Agronomy Division
Botany Division
Entomology Division
Grasslands Division
Plant Diseases Division
Plant Chemistry Laboratory
Soil Survey Division
Wheat Research Institute
Tobacco Research Station
Fruit Research Section
Dairy Research Institute

(c) *A number of Committees directing research carried out by several bodies or by the Universities*

These include Timber Protection, Radio and Building Research, Coal, Mineral Resources, etc.

(d) *Research Associations* coming under the aegis of the D.S.I.R.

Wool Manufacturers' Research Association
Leather and Footwear Research Association.

(e) The Department maintains Scientific Liaison Offices in London, Sydney and Washington (U.S.A.)

The Department publishes the *New Zealand Journal of Science and Technology*, and a series of separate bulletins.

(2) SCIENTIFIC RESEARCH UNDER OTHER GOVERNMENT DEPARTMENTS

The Department of Agriculture has a trained field staff dealing with field crops, animal husbandry and horticulture. It also maintains the Government Veterinary Laboratory and an Agricultural Chemical Laboratory.

The field staff of the Department of Agriculture carries on to a larger scale findings of the D.S.I.R. In practice this is an excellent working arrangement.

This Department publishes the *New Zealand Journal of Agriculture* which, although a farmers' journal, frequently contains semi-scientific articles.

The State Forest Service carries out a limited amount of research in forest management, silviculture, etc. ; the Post and Telegraph Department in communications, and so forth. In fact, many Government Departments tend to have research officers attached to them.

(3) MEDICAL RESEARCH COUNCIL. Medical research is organised under this Council and is carried out mainly at the Otago Medical School.

(4) THE ROYAL SOCIETY OF NEW ZEALAND makes grants for research by independent individuals. Scientific articles are published in the *Transactions of the Royal Society of New Zealand*.

(5) The larger MUSEUMS (Auckland and Wellington) carry small research staffs mainly covering certain aspects of biology and ethnology.

(6) MISCELLANEOUS RESEARCH. The Cawthron Institute, Nelson, established in 1920 from a bequest, carries on independent research in soil and nutritional problems of crops, entomological problems and mycological problems of fruit and other horticultural crops. Close collaboration is maintained with the D.S.I.R. and its departments.

A number of industrial firms are building up research laboratories to cover their special needs.

SOURCES OF NEW ZEALAND BIBLIOGRAPHICAL INFORMATION (Supplied by Mr. Charles R. Sanderson)

Andersen, Johannes Carl.

One hundred representative New Zealand books. 8p.

Wellington, Alexander Turnbull Library, 1925.

Chapple, Leonard, J. B.

A bibliographical brochure containing addenda and corrigenda to extant bibliographies of New Zealand literature. 47p.

Dunedin & Wellington, A. H. & A. W. Reed, 1938.

Hocken, Thomas Morland.

A bibliography of the literature relating to New Zealand. xii. 619p.

Wellington, New Zealand, Printed by John Mackay, 1909.

Johnstone, A. H.

Supplement to Hocken's Bibliography of New Zealand literature. 73p.

Christchurch, Whitcombe & Tombs, 1927.

Library of Congress. Division of Bibliography.

New Zealand; a selected list of references. 68p.

Washington, Library of Congress, 1942.

New Zealand. General Assembly Library.

A union catalogue of New Zealand newspapers preserved in public libraries, newspaper offices, etc. 38p.

Wellington, Government printer, 1938.

New Zealand. Government Stationery Office.

Books on New Zealand; a list of publications on scientific and historical subjects, containing reliable information relative to the Dominion of New Zealand. 16p.

Wellington, Government printer, 1929.

New Zealand Library Association.

Index to New Zealand periodicals, edited by A. G. Bagnall and others.

Wellington, the Association. Published bi-monthly.

New Zealand Official Year-book.

Wellington, New Zealand, E. V. Paul, Government printer.

1932 issue contains an excellent bibliography. 1941—a revision of above.

1942 and 1943—supplements to 1941 revision.

Scholefield, Guy Hardy.

Copyright publications received in the General Assembly Library.

Wellington, Government printer, 1940. Annual.

Bibliographical Work in South Africa

COMMUNICATED BY P. FREER

Librarian, University of the Witwatersrand, Johannesburg

Our aims are threefold :

(1) To encourage the publication of worth-while literature whilst discouraging the worthless ;

(2) To chart the past and present literature of the Empire ;

(3) To ensure its diffusion and conservation.

Aim 1. As to the worth while, allow me to quote the late Dr. Keppel
“ Librarians can make themselves more useful than they now are in recognising the need for books as yet unwritten, books on important subjects that should

be authoritative, simple and readable, and in extending the influence of their profession to see that such books are written and published."¹ Aslib, the Library Association, and the Research Grant Councils between them have the brains and the funds required. In a democratic world I see no way of discouraging publication of the worthless, except that resulting from improved taste, following the spread of education.

Aim 2. Some suggestions follow.

Aim 3. The restoration of your bombed libraries is the active concern of the South African Library Association, and in good time tangible evidence of our sympathies will emerge.

In normal times the colporteur will travel largely one way : from the mother country to the outposts of the Empire. Their output is still modest and might be reviewed from publishers' announcements to appear again in *Whitaker's Reference Catalogue of Current Literature* and elsewhere ; and through sample stocks that the Dominions' Office, the Royal Empire Society, the Universities' Bureau of the British Empire, South Africa House or selected booksellers could carry, much as the Oxford University Press does of similar presses abroad

The problems of the Dominion librarian and reading public are more complicated ; some of them are serious but merely temporary ones, we hope, for at present even our standing orders mitigate present handicaps only in part. There remains, too, more fear than hope for the completion of our war-time files of overseas periodical publications, and other literature lost through enemy action. Restoration of full airmail service and of fast ocean travel after the war will tend to reduce time and distance. In the meantime library budgets are overstrained because urgency demands more local purchasing to-day than we favoured in pre-war days. At no time did South African librarians enjoy the discount allowed to their confrères in Britain—at best the postage was waived. Rather is a 25 per cent. or even 40 per cent. increase on the English published price quite common practice, and in consequence our students are once more considering the establishment of their own book stores. That *rara avis*, the "Colonial Edition" of a book, never did carry its message in anything but fiction. The Government Departments are in a more favoured position. Their requisitions pass through "Exterior" via the High Commissioners and return in the diplomatic bag.

No doubt in consequence of our small population and smaller reading public the local booksellers offer a very limited selection. This in turn often depends upon the taste prevailing at Head Office. Hence the activities of the British Council are very welcome and operation of the programme of the National Book League eagerly awaited here. Basically our need is for a larger selection of English books, on approval if possible ; for them to be available promptly, and at the lowest possible price. Most grateful as we are for the Aslib *Book-list*, we need it—and some equivalent for the humanities—much sooner, even if just in galley form. Is it pure utopianism to hope that these bodies will co-operate with the Publishers' and Booksellers' Associations to sponsor well-stocked and efficiently run bookshops in each of our provincial capitals, *à la* Blackwell and Bumpus ? To this end established firms in Cape Town, Pretoria, Bloemfontein and Pietermaritzburg might first be tried out over an agreed period. Still more easily could H.M.S.O. and our Government Printer² exchange stocks of all publications issued by the respective Governments. At present, through prompt

¹ Carnegie Corporation of New York. Report of the President (1935), p. 17.

² S. Transvaal Branch. In his address on 4th August, 1943, Mr. J. Lewin recommended that the Government Printer should : (1) publish regularly a complete list of all his publications (2) give them greater publicity and open a branch sales office in Johannesburg (3) publish summaries of important blue books for the general reader as H.M.S.O. does.

action by the local Consulate, we actually get news of some Soviet literature sooner than of English. Here, as elsewhere, the United States Government has set up a Library of Information. Now at least regional Inter-Allied Book Centres are called for. It might be possible to combine these projects with the institutes set up by the British Council. They would all tend towards the desired realisation of international bibliography.

Your agenda might usefully include further anti-waste questions, e.g. :

(a) Co-operative establishment of Empire Bookbinderries. The outbreak of war interrupted the fairly general practice of Dominion librarians of sending consignments to British firms specialising in "Library" binding. As far as South Africa is concerned, the local *Ersatz* has proved costly in every way, and our accumulations are immense. We would welcome and could support a Branch.

(b) Co-operative cataloguing.

(c) The reprinting of important books now out-of-print. This matter is already receiving the attention of the American Library Association's Committee on Out-of-Print Books.

(d) The production of good books, cheaply : an extension of the present Readers' Union programme.

(e) The exchange of members of the staffs of the National Central Library and various Dominion State Libraries, as a step towards closer bibliographical liaison, and to furthering the education and training of the personnel concerned.

Here follows an enumeration of the chief guides to recent literature of the Union ³ :

BOOKS (GENERAL)

South African catalogue of books. Complete edition books published 1900-42, with supplement of books published during 1943. Ed. Nico. S. Coetzee.

Cape Town : H.A.U.M. 1943. 359 p. £3 3s.

Continued in annual cumulations of its *Monthly Supplement*. Does not claim to be, and is not, a complete record.

State Library, Pretoria. List of copyright accessions. Mimeographed.

Monthly since 1933, with annual cumulations for 1938 and 1939 at 5s.

A quinquennial volume is promised us. Very valuable as they alone include, not only books, but also the official and periodical publications.

BOOKS (SPECIAL)

The most economical method of naming the special aspects of our literature is perhaps one of bibliographical citation, with annotations where necessary.

AFRICANA

Johannesburg. University of the Witwatersrand. Gubbins Library. Monthly accessions list. 1934-. Mimeographed.

Mendelssohn, Sidney.—South African bibliography, being the catalogue *raisonné* of the Mendelssohn library of works relating to South Africa, together with a bibliography of South African periodical literature. 2v. London, Kegan Paul, Trench, Trubner & Co., Ltd., 1910.

Union of South Africa.—Parliament Library.

Annual list of Africana added to the Mendelssohn Collection. Cape Town :

The Library, 1939-. No. 1—1938; No. 2—1939; No. 3—1940.

Annotated. Normally issued only to members.

³ P. Freer and D. H. Varley. Bibliography of African bibliographies, *S. Afr. Libr.*, 10 (2-3), 38-42, 66-73, Oct., 1942; Jan., 1943.

⁴ Mr. Lewin styled "Mendelssohn" (1910, 2v.) "a monumental guide to South African literature."

AFRIKAANS

Nienaber, P. J.—Bibliografie van Afrikaanse boeke, 1861–1943.

Johannesburg : Publicite Handelsreklamediens, 1943. 841 p. £3.

Fills a long-felt want. The main section of 400 pages is arranged by authors, preceded by valuable lists and succeeded by Title, Subject and Chronological sections. Supplemented by monthly list of new publications in *Die Brandwag*. (Johannesburg : Afrikaanse Pers., 12s. 6d. per annum).

Ons eie boek : 'n Afrikaanse boekegids.

Kaapstad : Unie-Volkspers, 1935–. Quarterly. 6s. per annum.

Includes reviews of selected works in English and native languages.

BIOGRAPHY

Afrikaner-Personeregister.—Johannesburg : Afrikaner se Koopgids, 1942. 373 p. £3 3s.

South African *Who's Who*.—Johannesburg : Ken Donaldson. Annual. £3 3s.

Neither of these is exhaustive.

BOOK REVIEWS

New titles of bibliographic interest are noticed in *South African Libraries* : the official organ of the South African Library Association. Johannesburg 1933–. 15s. per annum.

HISTORY.

Union of South Africa.—Archives year book for South African history, etc. Cape Town : *Cape Times*, 1938–.

1941–42 is the last volume. 1939–41 consists of Vol. 6, chap. 1–6 (and last) of Cory's *Rise of South Africa*.

Van Riebeeck Society.—Publications.

Cape Town : *The Society*, 1918–. 10s. per annum.

Welch, Rev. S. R.—Some unpublished MSS. relating to the history of South and East Africa, with a preface and notes.

Pretoria : Government Printer, 1930. 68 p.

LAW

Copyright. Act 9–1916. Sect. 150 (i).—"Act to consolidate and amend the laws relating to . . . Copyright."

By courtesy of successive Governors a copy of every book received under the Books Registry Act of 1888 was sent to the British Museum ; the 1916 Act enforces such delivery. The British Museum reciprocates by sending certain of its publications to our larger libraries.

Roberts, A. A.—South African legal bibliography, etc.

Pretoria : Wallach, 1942. 389 p. £2 2s. 6d. Deserves wider recognition.

LIBRARIES

Union of South Africa.—Report of the Interdepartmental Committee on the libraries of the Union.

Cape Town : *Cape Times*, 1937. 64 p. 2s.

Appendix 1 : Bibliography of South African libraries and librarianship ;

Appendix 2 : Summary of South African library legislation.

OFFICIAL PUBLICATIONS

(a) Dominions' Office and Colonial Office List. London : Waterlow Annual.

Contains a "List of Parliamentary Papers and Non-Parliamentary Publications" since 1887.

Foreign Office List, etc.—London : Harrison. Annual.
Contains a list of " Papers relating to foreign affairs."

Great Britain. *Crown Agent for the Colonies*.—List of publications. Mimeographed.
Current monthly additions.

Statesman's Year Book.—London : Macmillan.

Useful " Books of Reference " : (1) Official ; (2) Non-official.

(b) For South African documents, consult the latest Union *Official Year Book*.
Pretoria : Government Printer. 5s.

S. Afr. J. Econ., *S. Afr. Libr.* and the State Library's *List* note the current output.

The Publicity Committee of the South African Library Association is working for a proper subject index to the *Government Gazette*.

PERIODICALS

Freer, P., ed.—*Catalogue of Union Periodicals*, vol. 1 ; *Science and Technology* ; ed. for the National Research . . . Board, etc.—Johannesburg : The Editor, *The University*, 1943, xvi, 525 p. 21s.

The successor to *Lloyd's List* (1927). Vol. 2 will be devoted to the Humanities.
Obtainable from the printers : Messrs. Lund Humphries, London.

South African Library Association.—Index to South African periodicals (including book reviews), 1940—.

Johannesburg : South African Library Association, 1941—, £2 2s. per annum.

UNIVERSITIES

Calendars

Should all be available at the Universities' Bureau of the British Empire.

Theses

Robinson, A. M. L., comp.—*Catalogue of theses and dissertations accepted for degrees by the South African Universities, 1918–41*.

Cape Town : The Compiler, University Library, 1943. Mimeographed.
7s. 6d. Indexes 1,750 items.

YEARBOOKS

In addition to those already cited :

Official South African Municipal Yearbook.

Cape Town. Selling agents : London, Edw. G. Allen ; Cape Town, Juta ; Durban, Adams. 25s.

Section XVI : Statistics relating to Public Libraries.

Union Castle Company.—South and East Africa yearbook and guide.
London : Low, Marston. 2s. 6d.

Finally, please accept my appreciation of the honour you do me in inviting this contribution.

DISCUSSION

The Chair was taken by PROFESSOR R. S. HUTTON. In the discussion the following took part : Mr. R. L. Sheppard, Mr. L. C. Key, Mr. G. B. Gresford, Mr. A. L. Poole, Miss J. Barton, Mr. E. J. Carter, Mrs. L. Moholy, Mr. B. W. Fagan, Miss M. I. Henderson, Mr. C. E. A. Bedwell, Mr. R. Brightman, Mr. A. B. Agard Evans, Mr. G. A. Shires, and Miss E. M. R. Ditmas.

Opening the Meeting, PROFESSOR HUTTON said that the papers would be taken as read. Many of the authors were unable to be present, so where necessary, by way of introduction,

he would refer to the contents of their papers. The chief purpose of the meeting was to improve the situation, to bring to this country more of what the Empire was doing and to ease the difficulties of access to what was published here. Aslib had considered Empire problems before. Mr. Crowther in his paper¹ last year mentioned the Commonwealth Science Committee which had tackled the problem, and as far back as 1933 Mr. Lewin, of the Royal Empire Society, had addressed the Aslib Conference on this subject.²

MR. R. L. SHEPPARD said that the Bureau of Hygiene and Tropical Medicine originated at a Convention of European Powers in 1907, to deal with the outbreak of sleeping sickness in Africa. In 1908 a Central Bureau, financed by colonial funds, was set up for the mobilisation of information on sleeping sickness. From 1908-11 the Bureau collected information to supply medical officers in the field and was so successful that in 1911 it was decided to bring tropical diseases also within its scope. From 1912-26 it was known as the Tropical Diseases Bureau, publishing a *Bulletin of Tropical Diseases*. In addition to this, the *Bulletin of Hygiene* was started in 1926, and from 1926-40, as the Bureau of Hygiene and Tropical Diseases, research proceeded in these two fields. In 1940 it was decided to include war medicine and surgery and to issue an abstract journal; in the same year the *Bulletin of War Medicine* began to circulate among the Allies. Papers were submitted to the experts responsible for the abstracts. Mr. Sheppard emphasised the continuity of recording important developments with reference to previous entries, and the continual maintenance of the international view. Not at any time was this intended as a substitute for personal intercourse among scientists.

PROFESSOR HUTTON, referring again to Mr. Lewin's previous contribution, "Bibliographical Work in the Overseas British Empire" at the 1933 Conference³ mentioned also the quarterly bulletin of *Overseas Official Publications*, formerly edited by Mr. Lewin. This publication, which had a most useful bibliography, was now suspended, but it was to be hoped there would be sufficient demand and promise of support to justify its being started again.

PROFESSOR HUTTON called on Mr. L. C. KEY to speak on Mr. Binn's paper. MR. KEY said the Commonwealth National Library could be compared with the American Library of Congress, its development being planned along the same lines. It was concerned with all the publications about Australia, the complex copyright list of books published in Australia by Australians abroad, and those interesting to Australians but published in other countries by writers of other nationalities. Scientific publications were chiefly the concern of the Council of Scientific and Industrial Research. The publication of abstracts was under consideration and there was a project for a Bibliography of Abstracts of the Social Sciences. Compared with this country, the Commonwealth's library resources were generally meagre, with perhaps half-a-dozen good, well-rounded collections, but there was much still to be done. Inter-library loans services were developing, some of these managing to maintain research services. The National Library undertook research, bibliographical work and abstracting, facilities being offered to research workers as and when required; and there was an Annual Catalogue of Australian Publications. On the question of international lending, Mr. Key suggested that documentary reproductions might be a satisfactory method in view of the time lost in sending books by surface mail. Professor Hutton said he hoped to hear where improvement could be made in existing services to Australia; because the journey was so long the use of microfilm should certainly be always kept in mind.

MR. G. B. GRESFORD said that strictly the title of his paper should be "Notes on Scientific Library and Information Services in Australia." Generally in Australia these were better than some people believed, and the research worker was not at a disadvantage there as compared with other countries. Moreover, the position was improving. Scientific liaison officers were established in London and Washington, and there was a scientific attaché to Moscow, so that secret and confidential reports could thus be handled. There had been some controversy in Australia about the publication of scientific articles in local papers when they might be published in the well-known journals of the world.

MR. A. L. POOLE introduced his paper by saying how useful Aslib had been in getting information for New Zealand libraries quickly. In the Dominion there is the Bureau of Information (in Wellington), and there is the library of New Zealand House and a Liaison Office in London.

PROFESSOR HUTTON, commenting on Mr. P. FREER's paper, pointed out that among other difficulties, 40 per cent. above the published price had to be paid on English books exported to South Africa; this might be partly due to war costs, but not entirely. A Regional Inter-Allied Book Centre could deal with various problems. Miss J. BARTON said that not only foreign countries came into the British Council scheme for export; for eighteen months work in the Empire had been going on, and although she was not in a position to discuss the matter fully, big developments are expected and much is being done. The exchange of periodicals is being encouraged.⁴ MR. E. J. CARTER spoke of the work of the Books and Periodicals Committee of the British Council under Mr. Stanley Unwin, encouraging book, periodical and library services. But in Delhi, on which so much money had been spent, there was no hospital and no library. Mr. L. C. KEY spoke of the time-factor and said that Australian government publications and text-books go by surface mail, which is too slow. America

¹ Eighteenth Conference Report, 1943, pp. 14-21.

² Tenth Aslib Conference Report, 1933, pp. 102-110.

³ See also notes on this subject communicated later by the British Council, page 88.

sends material by air, but only pure sciences are dealt with by such speedy means here. Why is not Britain making an effort in other fields besides science? Also Aslib should use its influence to speed up ship passages. MRS. L. MOHOLY said there were post-war plans for the microfilm service: the two problems were copyright and air mail. PROFESSOR HUTTON thought publishers might be asked to co-operate. MR. B. W. FAGAN, as an Honorary Officer of the Publishers' Association, said that speaking from the trade side it was not entirely a commercial problem—copyright was the author's right, and the publisher was no more than an interested party. He attributed the high price of books in South Africa to transport and distance. Prices were not to go down. The weight was against books of limited appeal, whether published here or in the Dominions: it was cheaper to publish 50,000 than 1,000. MISS M. I. HENDERSON asked why British publishers did not publish overseas; the Custodian of Alien Property in America had facilitated the publication of books. MR. FAGAN replied that war-time difficulties in the Dominions and Colonies prevented this being done. MR. C. E. A. BEDWELL, speaking as a member of the Library Committee of the Royal Empire Society, said that a book which deserved further recognition on the South African list was the *South Africa Legal Bibliography*, which was only 6d. more in Great Britain than in South Africa. Why did not the price factor cut both ways?

MR. R. BRIGHTMAN asked what was the circulation of Australian Science Abstracts. Referring to the question of publication of Australian scientific papers, he said he hoped that the *Journal of the Chemical Society* would be the medium selected. He was strongly averse to the multiplication of abstract journals and thought that one abstract journal in Chemistry might well serve the English speaking world. The American Chemical Society had approached the Chemical Society in London in 1899, and again in 1905, with a view to a scheme for the publication of joint abstracts. They met with no response from the Chemical Society, and now the American Chemical Society abstracts had a far larger circulation than those of the British Chemical Society. There was no question of approaching that circulation within the British Empire, and any approach for joint abstracts would now have to come from the British side. MR. KEY, replying, emphasised that Australian chemical abstracts and Australian science abstracts had a limited circulation only. The Australian National Service Council also operated, but only dealt with articles published in Australia.

MR. A. B. AGARD EVANS thought it might satisfy one of Mr. Key's requirements if arrangements could be made for a central body in each Dominion to abstract the technical press of the Dominion; to transmit the abstracts to the scientific liaison officer in London for circulation to the editors of the various specialist abstracting journals. In this way the home abstracting journals could be sure of covering the technical papers of the Empire. Experience at the Road Research Laboratory showed that inquiries from one part of the Empire which could not be satisfied by our own experts were frequently helped by recorded experience from some other part where the conditions were similar. Two instances which came to mind were assistance given to Kenya by experience in Ceylon, and a curious soil problem from Western Australia, the solution of which was helped by experience of similar conditions in one of the United States of America.

MR. G. A. SHIRES asked for a future meeting with the publishers—a Brains Trust on reproduction, not only copyright, problems.

PROFESSOR HUTTON said the 40 per cent. on prices was a war-time expedient. An import duty of 30 per cent. was threatened some years ago by the Dominions. Aslib, among others, passed a resolution which helped to prevent that. This resolution showed the strength of public opinion and so deterred the Dominions from acting.

The Chairman regretted that one important section of the Empire, India, was not directly represented at the Conference. It had been hoped that the delegation of Indian Scientists, who had recently visited Great Britain, might have been present. Unfortunately they had had to leave for the U.S.A. a few days before and, in the short time thus left for rearrangement of plans, it had not been possible to get alternative representation. The Indian scientists had been in contact with Aslib, and on the very day preceding their departure, Professor Saha had found time to visit the Aslib Microfilm service and to meet certain members of the Aslib Council. It was hoped that these contacts would be developed into a much closer liaison in the future. MISS DITMAS reminded the delegates that the Library of India House was a most valuable centre for information and drew attention to the copies of the library accession lists on view there.

Trade Catalogues in the Commercial Library

By G. K. WILKIE

Chief Librarian, Leicester Municipal Libraries

There is a prejudice in some quarters against stocking trade catalogues in public libraries because they are the media for advertising the commodities of commercial and manufacturing firms ; the argument being that a public rate-supported institution should not lend itself to boosting any firm's goods, but should confine itself to the published literature on the trade or profession, books written by authors for students.

Definitely in a commercial library one cannot afford to countenance such prejudices, because there is much valuable information in trade catalogues and house journals, and this information ought to be made available to the student and to the ordinary enquirer. Progress in engineering is constant and improvements in machinery endless. Text-books are out of date in two or three years. Sometimes a machine described has undergone vital change before the book has issued from the press. Engineering firms are constantly issuing brochures showing the latest improvements in their machines.

We have been credited in Leicester with having a large and valuable collection of trade catalogues. I am not in a position to agree or disagree with the adjectives used to describe it, but I can say that we find it a most useful section. Its use is not confined to local students, for we have had enquiries from other parts of the country which we have been able to satisfy. A large engineering firm in Leicestershire, within the last few months, requested the loan of the whole section on turbines. More recently, from further afield, a firm required information about the Mackay and Goodyear shoe stitching machines. These are both dealt with in textbooks on boot manufacture, but the illustrations are unrecognisable by the side of those contained in the brochures produced by the British United Machine Company in Leicester. A student was studying the automatic telephone. While making full use of our books on the subject he preferred the illustration of a selector in the G.E.C. catalogue. A quarry manager appeared to obtain considerable satisfaction from the study of various types of conveyor belt ; and a lecturer from a college studied various catalogues with illustrations and descriptions of the ohm-meter.

Apart from these I consider there is ample justification for the trade catalogue file in providing for local buyers a means of comparing the potentialities of similar machines produced by different manufacturers. If a retailer goes to a wholesaler for a certain article, be it a bed, a motor-car or a heating boiler, he is shown or given particulars of the article produced by the manufacturer for whom the wholesaler is an agent. If the would-be buyer comes first to the library he can consider the whole range of the required product by various manufacturers up and down the country.

The purpose of the trade catalogue and the house journal is to advertise the goods of the firms publishing them. Whether they are issued annually, monthly, or at odd intervals the intention is the same, to keep clients informed as to the latest improvements and particulars of the firm's goods. Sometimes details of the various parts and the construction of a machine, together with diagrams, are given, a great help to a student of engineering. The catalogues of certain seedsmen are useful to botanical students and to gardeners, containing as they do beautifully coloured illustrations as well as gardening tips. Their usefulness does not end there because, when withdrawn from the file, the plates can be added to the picture collection for circulation to schools. The house journal, which is published at regular intervals throughout the year, very often contains articles connected in some way with the firm's class of goods. An oil refining company may give a description of a journey in some foreign country, or an article on friction in engines, or describe prospecting and boring for oil. An engineering firm may describe the work on a big engineering contract, such as the erection of a large bridge, or the harnessing of a waterfall, or the opening

up of some distant land by the laying of railways or new roads. One may learn or suspect that the firm's machinery was used, but notwithstanding, there is invariably useful technical information to be gleaned by those interested in that type of work.

Having decided that a trade catalogue file is justified the next point is the formation of the collection. The larger local manufacturing firms will be known and they should be written to for their catalogues. The local Chamber of Commerce will usually give advice on this, but a press announcement of the formation of such a collection is worth while. The most profitable scheme, however, is to get the editors of trade periodicals to announce in their pages that your library is starting a trades catalogue collection and to ask that firms send their catalogues to you. Many trade journals have a column in which they announce the receipt of catalogues. The librarian should note these announcements and write to the firms for their catalogues and ask to be placed on the mailing list. Then there are the advertisements in trade magazines, often with the phrase "Catalogues will be sent on request." These firms should also be communicated with. You should always acknowledge receipt of catalogues, and if the request has not already been made a rider should be added expressing a desire to be placed on the mailing list for future publications.

The next question is how the collection is to be made available to the public, and while some will favour the strong cardboard pamphlet case, I think there is nothing to surpass the steel vertical filing cabinet. The catalogues should each be classified according to the system in use and placed in their order in the file. All items are, of course, classified as in the case of books. It is well to have a few shelves in close proximity to the file for the large sized catalogues—those in book form—and there are quite a number of these, some of them quite elaborate volumes with adjustable backs for inserting additional sections or replacing old ones. Notwithstanding the extra work it is advisable also to catalogue these items, or at any rate to list them. I suggest this should be on specially coloured cards under the names of firms and subjects, with cross-references where necessary. For my own part I prefer to have special drawers in the library's catalogue devoted to this section and not to have the cards distributed among the ordinary cards.

I hope I am not committing an indiscretion in mentioning a few of the outstanding catalogues in our collection. These are: British United Shoe Machinery Company, various catalogues; Gwynnes Centrifugal Pumps (this is well illustrated and shows section diagrams of pumps); Gardner's Oil Engines; B.E.N. Air Compressor Equipment, including paint sprayers; Lister's Engines; Harland and Wolff's Engines; G.E.C. Automatic Telephones; Ferranti's Metering Equipment; Hearson's General and Industrial Laboratory Apparatus; Cambridge Instruments Co., Ltd.

Of the house journals I select: all railway magazines under their names; *Crossley Chronicles*; *The Brook*, of Brook Motors, Ltd.; *Ford Times*, for the Ford Co.; *Rope Talks*, of British Ropes, Ltd.; *Service Link*, of Durex Abrasives, Ltd.; *Lubricity*, of Fletcher, Miller, Ltd.; *Nickel Bulletin*, of Mond Nickel Co., Ltd.

In conclusion I should like to stress one important factor in the establishment and maintenance of a trade catalogue section, and that is the person who is in charge of it. That person must first of all have faith in it. He must be keen, energetic and alert to the possibilities of adding to the collection. He must watch all trade and scientific papers and magazines, and pay particular attention to the advertisements. He must see progress in various lines of industry and note the firms that are making equipment for it. He will have a pile of duplicated circular letters at hand ready to send one off whenever he sees an opportunity to add to his stock. He will never forget to acknowledge gifts and will occasionally write an appreciative letter complimenting a firm on an outstanding production. The success of this section depends on the man in charge of it.

DISCUSSION

The chair was taken by DR. W. O. HASSALL. The following took part in the discussion: Mr. L. G. M. ROBERTS, Mr. P. HUNOT, Mr. W. C. BERWICK-SAYERS, Miss M. EXLEY, Miss B. SCHAFER, Professor R. S. HUTTON, Mr. F. GREENAWAY, Mr. C. J. GOLLEDGE and Mr. B. FULLMAN.

DR. HASSALL said that it was surprising how few people, and particularly business men, knew the literature of their own subject and how to use it. Even valuable reference works such as the *Adressbuch der Adressbücher* were unknown to the majority. It was therefore easy to understand why the subject of trade catalogues had been so neglected. It was fortunate that the paper was to be read at this time, when the thoughts of business men might be expected to turn to post-war opportunities. His own interest in foreign trade catalogues had a certain bias. In spite of Goering's order for the elimination of all pictures of German factories in trade literature, quantities of this literature had already reached England out of reach of the industrious German scissors.

Introducing his paper, MR. G. K. WILKIE mentioned that the Leicester Public Library aimed at making as complete a collection as possible of trade catalogues for the benefit of commercial men. Librarians found trade catalogues were untidy material to store, owing to their various shapes and sizes, and it was necessary to have both shelving accommodation and vertical files. At Leicester it was the practice to catalogue trade literature separately from other items on special cards. He maintained that the trouble of shelving trade catalogues was well worth while, and instanced problems he had met which could only be solved with their help.

DR. HASSALL described his own experience of trade catalogues as being limited to those of foreign countries; his problem was to distribute the material he obtained to the department which most needed it.

MR. L. G. M. ROBERTS welcomed the paper because the results of much valuable industrial research were to be found in trade literature, and he was glad the public librarian was alive to its value. Commenting on the diversity of size and layout in the catalogues, he said that industry should be persuaded to produce the catalogues in standard sizes, and he suggested that Aslib should become a centre of trade literature.

MR. P. HUNOT thought some support for Mr. Roberts' suggestions might be forthcoming from advertising agencies.

MR. W. C. BERWICK-SAYERS recalled that as long ago as 1916 the Library Association had discussed trade catalogues and agreed that it was necessary to place them in library files. Extensive collections were kept at many public libraries, including Liverpool, Glasgow, Manchester, Leeds and Croydon, as well as Leicester. Enormous premises, staff, etc., would be necessary if Aslib were to attempt to become a centre for trade literature. In 1895 Mr. P. UTLEY, of the Institut International, had said that every trade catalogue in the world should be of the same size and have the Dewey number on it. Mr. Berwick-Sayers added that the information given in trade catalogues was always weeks ahead of other forms of literature.

MISS M. EXLEY said that in Sheffield the catalogues were kept apart from the other literature, and were filed in alphabetical order. She asked if normally the special libraries analysed the information in trade catalogues. MISS B. SCHAFER spoke of the great value to their own undertaking of the information given in trade literature. She pointed out that if all public libraries wrote round to firms asking to be put on the circulation list, then firms might be less generous in this matter than at present. MR. HUNOT advised Aslib to encourage the collecting of such literature by keeping a central register of those people who had collections. PROFESSOR HUTTON referred to the many items in the nature of trade catalogues which he had collected during his travels abroad, especially from America. He deprecated the practice of discarding the advertisement pages of periodicals before binding. MR. F. GREENAWAY agreed that the advertisement pages of periodicals were valuable and would one day prove to be an important source of cultural information. He asked if information officers inserted material from trade catalogues in their bulletins.

MR. C. J. GOLLEDGE said that trade catalogues formed an integral part of their library, and that they noted advertisements which were of importance. He spoke of the usefulness of the Patent Office in supplying the information given in trade catalogues.

MR. B. FULLMAN emphasised that there was nothing new in the idea of collecting trade catalogues. In his library no distinction was made between this and other literature. It was not possible for the majority of libraries to have the advertisement sections of publications kept in their bound volumes, but it might be a good thing if it were arranged that some libraries should keep them.

MR. WILKIE, in reply to comments, said he had not intended to give the impression that Leicester was doing something no other library was doing. He had full sympathy with members regarding the variety in size of the catalogues, but he found it convenient to put books on shelves and pamphlets in a vertical file, whatever their size. The practice in their library was not to analyse the contents of the catalogues, but to classify by the speciality of the firm.

The Technical Information Bulletin and what to put in it

By GEOFFREY A. SHIRES, M.Sc.

of the Dunlop Rubber Company, Ltd.

An industrial organisation needs to keep abreast of all the available technical and allied information likely to serve its interests. It is for this purpose that information bureaux and information officers are maintained, and one of their quite widely recognised services is the issue of abstracts from the literature. The technical information bulletin is here defined as "a regular summary of current information conveyed mainly by abstracts from the appropriate literature and other published sources." Its purpose is to inform the technical staff as quickly as practicable of any published material about which they need to know, indicating briefly its general content and special applications. This has the two-fold result of keeping them posted and reducing the amount of necessary reading and circulation of periodicals.

The principles to be suggested can be readily extended beyond the interests indicated, but for the sake of precision the type of bulletin dealt with here will be considered as an offshoot of an information service working mainly for technical and research staff in an industrial concern. Since the idea of such a bulletin is by no means new, emphasis will be laid on the material in the bulletin and its handling and treatment, that is to say, "what to put in it." Details of method, or "how to do it," will be described only as they affect the working and usefulness of the bulletin.

THE BULLETIN IN PERSPECTIVE

Modern ideas in design and planning urge the need for an article to possess fitness for its purpose. When an information bulletin is contemplated, it is most important to lay down exactly what its objects are intended to be, and for the information officer to be absolutely clear about this. The general aim of posting staff with information may be interpreted along either of two main lines: to give an exhaustive summary of all relevant information, or to select carefully only what is most needed. The course struck between these extremes will depend on the circumstances, but the nature of these circumstances and the policy to be followed to meet them must be clearly understood.

Consider the essentials of a service of the type under discussion:

- (a) Information bulletin
- (b) Circulation system for periodicals
- (c) Stock of periodicals, pamphlets and books
- (d) Information file and index
- (e) Search system
- (f) Contacts with outside sources of information

One of the principal snares in a service of this kind is the slavish and unimaginative doing of unnecessary work. The libraries, public offices and research bodies exist to provide or publish the bulk of the information likely to be wanted. Private services are best concerned with using and interpreting what the others supply, supplementing it only as particular occasions demand. Of the six essentials, once (b), (c), (d) and (e) are properly planned and working satisfactorily, (a) and (f) then become the most important. In short, establish the contacts (f), and then devote attention to shaping (a), the bulletin, *to meet the special needs* of the Company or organisation it represents. That is the purpose the technical information bulletin has to fit.

THE EXPERT TECHNICAL INFORMATION BULLETIN

The bulletin, then, must not be allowed to do redundant work. The field of rubber manufacture and rubber products is a particularly good instance

where this principle can be usefully applied. Rubber technology and allied subjects are well covered by published abstracts and existing services. The Intelligence Division of the Research Association of British Rubber Manufacturers is remarkably exhaustive and pertinent to our general needs, and there is plenty of other effective material on which to draw. This applies equally in other industries, engineering, chemical, metallurgical, textile, plastics, etc. What is not necessarily always catered for is the host of special and perhaps transitory interests of individual firms, and still less of individuals working for them, especially when these interests are focused on one specific product or process and its development or application, which may not be known outside the organisation. At this point the internal technical information bulletin can come into its own to perform a unique function.

I will describe a bulletin of the kind I have been leading up to; it is to be understood that any generalisations which follow derive from experience with this particular venture. This bulletin is designed to meet the special technical requirements of a company manufacturing tyres, tyre accessories and other rubber products; it aims to supplement information available inside and outside the company's organisation by providing abstracts and other information from the current published literature, selected and presented to be of the maximum usefulness from the company's special technical standpoint. This is to be done with a minimum of overlapping of existing material. Except for a few specialists who wish to see certain journals promptly, the bulletin almost entirely replaces the general circulation of journals to technical staff. An essential part of the bulletin service, however, is that the original of any abstract in it can be borrowed on request.

The special characteristic claimed, of appropriateness to its purpose with emphasis on internal interests, calls for a high degree of expertness in selecting the material. Abstracting methods will be described in detail below, but the basic principle is that each periodical is abstracted by the most suitable person available on the technical staff, which thereby works as a team and pools its efforts for the common information. In our system sixty members of the staff, including heads of departments, abstract 100 regular journals. The technical information officer acts as editor of the bulletin, taking a share in the abstracting, but not personally undertaking it all.

BROAD SELECTION OF MATERIAL

It is helpful to visualise the available material in three main groups:

(1) **Specialised Technical Items**—The first interest of the technical staff is in the materials and products with which their firm is concerned—in this instance, rubber and its ancillary materials, and tyres, tyre accessories, and some other products. Therefore, this group includes all information on rubber and tyre technology, covering practice and principles in raw materials, development, manufacture, use and performance. This approach holds equally for other industries.

(2) **General Technical and Scientific Items**—To-day there is scarcely a branch of science that the industrial scientist does not draw upon for information at some time or other. This group includes relevant information from sources dealing with physics, chemistry, mathematics, engineering, metallurgy, electronics, and may go as far as, for example, building science, medicine and biology. It is the group of general and allied sciences useful to the industry in question. The items in it constitute about 15 per cent of the total abstracts in the bulletin under review.

(3) **General News**—It is regarded as a secondary but important duty of the information service to provide, not only technical information, but also any "news" of a general kind that will contribute to the liberal education of the staff by adding to their background of useful knowledge. As far as we know, this feature of our bulletin is unique, and the "General News" section, an

addendum to the main issue, with a proportion of about 15 per cent of a total 3,000 abstracts per year, draws its abstracts from articles on management, economic, educational, commercial and advertising subjects, in the technical or industrial periodicals. It is important that the supply of "news" be taken chiefly in the stride of technical reading and not developed into a large-scale task of itself. The current spate of articles on research needs or on post-war planning provides many suitable items in this group; the Beveridge Report and the White Paper on Education are examples of general publications specially obtained and made available through the bulletin. Room is found also for the "personal paragraph," or information *about* people whose names and activities have news value for the bulletin's readers; articles, technical or general, *by* people specially known to the company may have a peculiar interest too. This departure is considered to have a healthy influence on both abstractors and readers in preventing them from becoming entirely "laboratory-minded" from over-specialisation.

GENERAL POLICY OF THE BULLETIN SERVICE

The bulletin is regarded somewhat as a technical newspaper: its readers are encouraged to read it from cover to cover, and therefore no index or contents sheet and no arrangement of items by subjects is used, although for convenience all abstracts from the same journal are consecutive. It is the aim to issue the bulletin promptly, before the information in it is "cold," but it has not been found necessary to publish more often than weekly. Occasional articles of first urgency are sent as soon as noted to the appropriate individuals without waiting for abstracts.

Once a bulletin is issued, two other services become available: the request system whereby originals are circulated to readers asking for them, and a card index of abstracts likely to be of subsequent interest. About 80 per cent of the technical items are indexed, but very few of the general news items. Abstractors are encouraged to submit their abstracts on cards to a uniform system, and when this is not possible a copy is made on a card.

ABSTRACTING METHODS

The general idea underlying the bulletin should now be clear. Of first importance is the selection and treatment by the expert abstractors of the material in the journals sent to them by the information office. It must be confessed that the system as it works in practice is an approximation to an ideal, the ideal of missing nothing that will be of use to all the technical readers of the bulletin. This ideal would certainly not be achieved by the simple method of "putting everything in to make sure," which not only ignores the importance of studying the material carefully and expertly to pick out what is of peculiar interest to the bulletin's own readers, but is also inefficient because a great deal of time is spent in abstracting information available in published abstracts. The present system is believed to be perhaps the best working compromise between the unattainably perfect and the painstakingly inept.

The experts must operate expertly. The circumstances preclude any special training as abstractors, but by example and experience they can be developed into a team working together to extract information for their mutual advantage. The use of the word "extract" here is deliberate. The importance of not repeating other abstractors' work, but of making instead a positive contribution to certain special needs, has been stressed, and "extracting", which may include "abstracting," is intended to express the *picking out* of information concealed, as it were, beneath the surface or not evident in its full significance until viewed from a specified angle. An expert team of "extractors" should be able to judge what is of interest to all or to individuals, to pick out and focus attention on what is new, and to indicate possible applications or developments. They must consider all they read from the standpoint of materials, processes, technique, theory and ideas. They should be constantly on the lookout for technical "news," and their touchstones should be the words "new," "signi-

ificant," "useful." New ideas in fields beyond their own or their company's should be explored, but a kind of inverse law holds here, that the further removed an item is from immediate interests, the more outstanding it must be to merit extracting. The extractor's personal critical judgment, where necessary, is considered vital to the spirit of this kind of service, but it must always be made perfectly clear who is speaking, the author or the extractor.

All this is not to say that there is no place for straightforward abstracts; on the contrary, these, carefully chosen, form the nucleus of the bulletin, but it is the specially oriented items that give it its distinctive character. Not all worthwhile information needs expert treatment, and there is room even for generalisations of the type "an illustrated article of popular interest on. . .", so long as it is appreciated that such items alone do not make an expert compilation! The efficiency of the bulletin service depends upon a careful balance of selection and treatment, the items themselves being useful and their treatment making it easy to decide if the originals need to be called for. Many items can stand alone, not needing requests, and the proportion of these in the bulletin in question is nearly 50 per cent.

It should be unnecessary to add that every journal should be perused by the abstractors from cover to cover, advertisements, reviews and notices of books and other publications, digests of patent specifications, papers and translations, and announcements of meetings all being studied as well as the regular text and editorials.

STYLE

The manner of writing-up extracts (or abstracts) is important, not simply for its own sake, but also because it can be made to increase their usefulness. Anything worth writing about should be written in a way that compels attention; items in the bulletin should be clear and informative without being long, but concise without being "scrappy." A common method of wasting words is to repeat most of the title of an abstract in the opening sentence. In condensing information, the writers must not forget that in many instances their object is to save others the trouble of reading the full text. The implication in the title of a recent very helpful book, *The Reader Over Your Shoulder*,¹ is a useful reminder in writing of all kinds. Reasonable abbreviation and a "telegraphic" economy of words are desirable in moderation, but must not degenerate into untidiness. The average length of the abstracts and extracts in mind in this paper is fifty words, and 100 words is rarely exceeded.

SOURCES OF INFORMATION FOR THE BULLETIN

These are primarily the information officer's concern, although extractors can well keep a constant watch for occasional information from miscellaneous sources, or inform him of any new regular publication they come across. The normal sources are:

(a) Periodicals

Appropriately selected

(b) Government and other official publications (c) Research association publications

If confidential, are not abstracted, but circulated with discretion. It may be permissible to give titles only in the bulletin. Sometimes permission to abstract must be obtained, especially if the bulletin circulates outside the company's organisation.

(d) Transactions, etc., of learned societies

(e) Published abstracts

Not further abstracted as a rule, but reproduced with the remark "quoted in full," and a clear indication whether the original is available or not.

(f) Patent specifications (g) Published translations

As for (b) and (c).

¹ R. Graves and A. Hodge, *Cape*, 1943, 185.

- (b) Trade literature
- (i) House journals
- (j) Publishers' catalogues and book lists

If a new book or pamphlet is of obvious importance, it is bought at once and noticed in the bulletin when available. Otherwise the title or abstract of review is given. Or it may be borrowed for review.

(k) New books

Internal information and reports do not appear in this list because the information service envisaged deals only with published material.

All technical staff should be expected to contribute abstracts from current journals or books (not regularly taken) which they borrow from outside through the information service. This source is frequently missed, but if a periodical is worth obtaining specially, the information in it is surely worth passing on. Lectures and radio talks provide occasional extracts.

THE "EDITOR"

The information officer's job as editor of the bulletin is to make sure that the team of abstractors provides the right kind of information in the best form reasonably quickly, and to issue it in the bulletin in the most useful manner. This cannot be done entirely from an editorial chair. In the first place, he must be generally familiar with the technical work that is going on in his firm, and the trends of its development, and must know the many points on which information is required both in long- and short-range terms. Otherwise he can neither advise the abstractors nor sub-edit their contributions properly. A broad experience of his industry is therefore desirable, and he should be supplied with all general technical progress reports, and with the records of research or development meetings if he does not attend them himself. It is his own responsibility to keep informed of general and particular needs by personal contacts with the readers of the bulletin as far as practicable. Equally important is the direction and co-ordination of the abstracting team. If a team never meets as a team it will find it hard to work as one. Therefore, the abstractors should be called together, perhaps once or twice a year, for a refresher on the requirements of the system and to underline their sense of working as a team. In the interim the editor keeps in touch with the individuals, discussing with them any reactions to the bulletin service that may affect their operation. To do this, and to maintain a "live" service, he must keep his finger on the pulse of his public, and from time to time he should go out to feel it by making enquiries, not waiting until suggestions or criticisms come in. The usual routine information office records, which will show the number, nature and distribution of requests, and the yield from each journal, lend themselves to easy analysis, which should be made regularly to give a pointer to what is wanted and how the service is being used. Up to a point the users (readers) can be guided as well as the compilers: the usefulness of anything depends partly on what the user brings to it, and further, a reader gets more satisfaction if he is occasionally informed in person just what the bulletin is intended to give him, and his opinions ascertained. Time spent in this way is one of the editor's best investments. It is equally desirable to discuss individual points with abstractors, and not to let them get the impression that the editor wields an autocratic "blue pencil." He must certainly do some regular abstracting himself, and he can gain valuable experience by abstracting journals for his abstractors when they are absent, at the same time avoiding delay.

In reviewing the abstracts received, they should be allowed to stand as far as is consistent with the general policy. Some editing will be necessary to preserve consistency and avoid duplication. Items repeated from more than one source may be merely cross-referenced, but it is no disadvantage to repeat an item in the bulletin in a slightly different form for emphasis. As far as his time allows the editor should rapidly check the journals (which should *always*

be returned with the abstracts) against the abstracts received, because something that has escaped the abstractor may strike him. I am sometimes asked, "where do you draw the line?" i.e. in deciding whether or not a particular item shall go into the bulletin. The answer is that it is not a line, but a fairly wide band, separating the plainly important from the trivial, and the many items falling within that band reflect the individual interpretations of the members of the team. If a test must be specified, it would include the factors of news value or novelty, importance, usefulness and the desirability of action being taken as a result of the information.

The editor, acting as his own proof-reader, should watch that no reference or other details affecting the usefulness of the abstracts are omitted; small but necessary points here are a clear indication of the length of an original in comparison with an extract, and a definite statement when originals are not readily available. It is also his responsibility to follow up advance notices of publications, meetings, etc., and to see that subsequent information is obtained when available, for otherwise the preliminary information in the bulletin may be both useless and irritating. Finally, he must see that the bulletin is not used as a discussion forum or a propaganda platform!

PRESENTATION OF THE MATERIAL IN THE BULLETIN

Layout deserves careful thought because it is wasteful not to present written material in the manner that will best compel the attention of readers, but a detailed study of the principles involved would be out of place here, and layout will be considered only as far as it directly improves the use of the bulletin. To be efficient, layout and style of type should appeal to the eye and make for easy reading and quick picking out of information and reference details in order of relative importance. Reference numbers should be easy to identify but definitely subordinated to the reading matter. Any reference data not required in using the bulletin should be left out, and kept on the index cards where it is wanted. Authors' names are not needed in the bulletin unless they convey useful information. Notices and appeals referring to the information service should be effective without using undignified or "cheap" methods of display.

SUMMING UP

All the ideas in this paper relate primarily to a particular conception of a technical information service. If a broader service is envisaged, it should not be difficult to adapt the bulletin to it. The bulletin described is complete only with respect to the technical requirements of one department in one firm. Its relations to other departments, commercial, manufacturing, maintenance, are largely incidental and taken in the stride of its technical service. Though designed for the use of the technical staff, its circulation is much wider and includes other home and overseas factories and associated companies.

The technical information bulletin is but one important unit in the structure of an information service, and it should always fit into and work as part of that structure: there should be no divorce of the bulletin from the service as a whole. The service considered here tries to put its emphasis on the special quality of the work attempted, rather than on the more usual one of exhaustiveness; it takes pains to extract *pertinent* information rather than absorb passively what may come along. The bulletin is intended to be in harmony with these general aims, and it exists both in its own right and as a link in the chain periodicals—abstracts—card index—specialised reference file. Above all, it must remain a servant, and not be allowed to become a master, and the information officer must not be afraid to change its style or operation as good reason dictates, and so long as he ensures that it continues to serve its purpose of providing technical news quickly.

DISCUSSION

The chair was taken by MR. EDWARD J. CARTER. The following took part in the discussion: Mr. E. N. Simons, Mr. D. V. Arnold, Mr. J. E. Wright, Miss A. M. Mostel, Dr. P. S. Hudson and Miss E. W. Parker.

The Chairman introduced the speaker. The discussion was begun by MR. E. N. SIMONS,

who pointed out that Mr. Shires' bulletin was not unique in including news. Edgar Allen's bulletin, for instance, had had a news section for years. He asked how Mr. Shires persuaded his technical men to do the abstracts, his own experience being that the technical men expected him to give them the abstracts.

MR. D. V. ARNOLD asked how Mr. Shires managed to circulate his abstracts in a week ; also, did he allot to his technicians for abstracting specific subjects or specific journals ?

MR. J. E. WRIGHT wanted to know if Mr. Shires relied on the technical expert abstracting what he liked, or was a particular abstract demanded. It was desirable that someone should weed out the unwanted material and send the rest to the officer with instructions to abstract certain articles. Also, why did Mr. Shires leave out certain bibliographical details ?

MISS A. M. MOSTEL thought that broad subject headings were useful and should be used. If a bulletin were intended to circulate outside its own organisation, the bibliographical details mentioned by Mr. Wright seemed very desirable, and she questioned the expediency of their omission.

DR. S. HUDSON asked how Mr. Shires dealt with articles in foreign periodicals. The technical man being unable, through his lack of languages, to make the abstract himself, he looked to the Information Bureau for these abstracts particularly. Dr. Hudson stressed that an abstractor dealing with a foreign language should be proficient in both the language and the subject.

MISS E. W. PARKER, referring to Mr. Shires' statement that names of unknown authors were omitted, suggested that the name, however little known, might turn out to be very important. One of the people who received her bulletin had told her that on meeting a man he was able to talk to him about his work because he had seen it in the bulletin. She was surprised that only 80 per cent. of the material selected was indexed.

MR. G. A. SHIRES, replying first to the question how did he get the technical man to do the abstract, explained that he was fortunate in having a Director who said ' That is how it is to be done,' which settled the matter. This method was employed before he joined the organisation. He found that most of the technical staff were amenable ; some did the abstracts well and quickly, some not so well and not so quickly, and a small minority proved rather difficult. Each individual had the same journal to abstract each week or month, or whenever it appeared. If he found an article right outside his field, either he sent it back to the Editor saying so, or he sent it on to the appropriate person.

Answering Mr. Wright, Mr. Shires said it was his practice to glance through the journals himself, and he did some of the abstracting himself. On the point raised by Miss Mostel, his entries were typed twice, once with full details for his records, and once for the Bulletin. Replying to Miss Parker, the 80 per cent. referred to the Bulletin ; more was indexed for the permanent records. The difficulty described by Dr. Hudson was met by getting translations, if possible, and abstracting them, using the translation as he would a journal. Some of his research workers acted as translators.

MR. CARTER thanked Mr. Shires for his excellent paper, and regretted that time did not allow of any further discussion.

The following written contribution to the Discussion was received after the Conference from Mr. T. R. PERKINS, of British Nylon Spinners, Ltd. : *" I was most interested in the account of the Dunlop Rubber Company's Technical Bulletin which, I note, is circulated without the information given being accompanied by mention of the journal and author. Has Mr. Shires considered the importance of including such data, particularly the mention of the author concerned, if only to supply a memory aid to help the recipient, e.g. a researcher, to label and so fix the information in his mind, especially in the circumstances so often obtaining, where the researcher finds himself confronted from day to day with an almost indigestible welter of new facts ? "*

MR. SHIRES has replied : *" We always include the name of the journal. Formerly, the authors' names were included in every case, but recently we have left out the less significant names, to reduce the amount of reference detail printed. In response to requests we are now putting back some, at least, of these. All details are included on our Index Cards. "*

Developments and extensions in the uses of Microfilm

By LUCIA MOHOLY, A.R.P.S.

Director, Aslib Microfilm Service

Since my report at this Conference in September, 1942, things have not gone too badly for microfilm. Until a few years ago microfilm and its uses were practically unknown in this country. Some of us have been privileged to see what was being done in the United States, and for the United States here, and following the American example, we started working on similar lines. It took some time to make microfilm more generally known; and we are still engaged on the next stage, the process of making it popular. In the early stages the public tolerated microfilm as a necessary evil in an emergency. This attitude of toleration is now gradually receding, and a more positive attitude is being adopted; microfilm is now accepted as a practical means of research which has come to stay. During the period of transition from toleration to acceptance, microfilm was in the position of master more than servant, and the questions foremost in our minds were: What can we do with microfilm? or, Where can microfilm be fitted in? Being gradually assimilated into the pattern of our lives, microfilm is now no longer the master, though it may need a few more years to make it a perfect servant.

There is a clearly defined line between services "with an idea," like ours, and purely technical services which are run on commercial lines. Our activities cover a considerably wider field than the mere technical processes of filming, copying, enlarging, etc. A commercial enterprise will presumably do the technical part of the work in very much the same way as we do, deliver the copies, return the originals—and there it will end. It does not end there for us by any means. Our day-to-day activities include the recording in detail of every strip of film of which we retain a master negative. We have introduced press marks, we have catalogue entries with all available particulars, and we are building up special filing arrangements. These sections resemble a cataloguing department in a technical library. Like other technical libraries we consider our cataloguing an essential part of our service. We devote to it a great deal of time and labour, mainly because it is indispensable for identification of each item and part of an item on our files; beyond this, our catalogues serve us as a basis and starting point for the acquisition of new items. The layout of our index cards will at a glance show a complete picture of our holdings in each particular case. We try to fill gaps wherever possible. We have been fortunate in establishing a number of most useful contacts with Government Departments and special libraries. Their co-operation has enabled us to extend our services far beyond the original scope of a mere technical unit.

I feel we are entitled to say that we have moved with the times; and microfilm, among other things, has been very much on the move too. It is now rapidly heading towards new developments. Mr. Archibald MacLeish has been among the first authorities in high office to refer to microfilm as a matter of course in a speech delivered in London during his last stay. Dealing with the intellectual needs of peoples in liberated countries, he suggested that lending services in libraries should be organised on a world-wide basis: photographic copies and micro-copies to be used extensively to supplement those services when either original books are not available, or in cases where it appears more appropriate to send out copies instead of originals. This speech was followed up by a lively response in the correspondence columns of the great national newspapers.

We hope that photographic processes, microfilm and others, may prove themselves capable of contributing their share when called upon to do so. I have little doubt (and I believe I am justified in saying that this view is now shared by many of us), that there is a great future in store for microfilm and

similar techniques as efficient means for extending and improving library services. Though transport difficulties may be less severe after the war, the despatch of a small package of film from one part of the world to another will always be easier and quicker than the transport of a bundle of bulky books. But the sending out of books, or microfilm, is only one half of the problem. It is the return journey which is of greater significance. Books sent out on loan have to be returned ; films may usually be retained. It is hardly worthwhile to organise lending services for films unless they are used locally in a microfilm reading room. The posting of a film strip is simple, but to watch for its return and all it entails requires an organisation more expensive than the cost of the film itself.

Side by side with the plans of an international clearing house for libraries and the loan of literature printed or photographed, are the various proposals for setting up an International Science Co-operation Service on the lines of the British Commonwealth Science Committee or the International Committee for the supply of Scientific and Cultural Reference Materials now operative between Great Britain, U.S.A. and China. Details of a world-wide international scheme have recently been outlined by Dr. Needham.

The twin idea of an international clearing house for library services and an international clearing house for scientific co-operation offers great opportunities to the services of documentary reproduction. I visualise two main tasks : (1) the interchange of complete books, periodicals and other publications on microfilm ; (2) the supply of articles from journals, chapters and passages from books, and other selected items needed for specialised research, in film, microprint, or photostat copies as required. While documentary reproduction may have an important task to fulfil in a future world organisation of inter-library loans, I feel that its tasks in co-operating with an international research service will be, if not greater in general scope, almost certainly greater in variety. Documentary reproduction must extend its services to all provinces of science and learning, and I believe that here lies our line for the future. I am looking forward to the time when we may be able to join forces with a staff of research workers, and together take an active share in the development of an international research service with documentary reproduction as its technical section. We shall then no longer ask : What can we do with microfilm ? but we shall call upon microfilm because we need it and because we know when it will serve our purposes best.

As far as microfilms are concerned, these developments are subject to one major condition : an adequate supply of reading facilities. This was a sore point two years ago, and unfortunately it still is. The public, no doubt, have taken to microfilm, but manufacturers of reading equipment have not followed suit. There is a definite demand for microfilm readers, but maybe it is not great enough to justify, in the opinion of British manufacturers, arrangements for large-scale production. There may be other reasons such as war-time restrictions in the supply of lenses, metal and wood and, of course, shortage of labour. But I have often wondered whether fundamentally manufacturers have lacked confidence and therefore have not dared to take the risk of anticipating and promoting what in our opinion should be a growing market. Several firms came to consult us : they submitted plans and drawings and had them checked ; others produced models and had them tested in our workshops ; but none of them has produced the perfect reader. We are now faced with the awkward situation that research workers, after having accepted microfilm as one of their tools, are discouraged by eye fatigue when reading it.

First class microfilm readers are still manufactured in the United States ; but the supply is restricted to applicants who are eligible for the necessary permits and high priorities. Recently a microfilm viewer was designed in the U.S.A. for a special purpose. It has the appearance of a miniature reader-projector, is collapsible, folds into a flat box 5 by 2 inches, and weighs less than 2 oz. It is useful for looking up references and will in emergency cases allow the reading of a few pages. It has been a great standby in extraordinary

circumstances, but it is not suited for research purposes and other permanent uses. We hope that it will soon be possible to design a reader on similar lines with higher magnification ratio and a wider reading field.

Some users of microfilm may sooner or later be confronted by yet another problem: the problem of filing and storing their films. Recommendations on these subjects were issued a few years ago by the U.S. Bureau of Standards, and earlier this year by the British Standards Institution. British Standard No. 1153-1944 makes provision for three distinctly different cases: large rolls, small rolls and strips. It has been recognised that each method has its merits according to the prevailing circumstances. It is hardly possible for any library to decide on the method of filing films without taking into account the specific character of the subject matter, the type of reading machine, and other details of organisation and services available. There will be cases when librarians are in favour of more than one method to be applied concurrently: complete volumes of a periodical may be filed in large rolls in sequence of issues and/or by individual issues, presumably in small rolls. A third alternative, and one which I believe can be adopted only if one of the two others exists already, is the filing of individual articles and passages under subject headings. This filing system may take the place of a subject index and press cutting file combined, with the additional advantage of leaving the original volumes intact. The strips of film required for this combined file can be run off separately as individual negatives or they can be copied on positive film from the original negative. In either case care will have to be taken to copy twice, separated by a few blanks, any pages where the end of one paper and the beginning of another appear together.

The question of a combined Index-and-File takes on an entirely new aspect when microfilm is substituted by microprint. Microprint is not a new invention. Experiments to investigate its possibilities have been carried on since about 1932—in this country by Professor Sayce of Kings College, Newcastle, in America by Dr. Bendikson and Admiral Fiske; and lately by Mr. Boni of the Readex Corporation.

The usefulness of microprint has recently been stressed by Fremont Rider, Librarian of the Wesleyan University Library, in his book *The Scholar and the Future of the Research Library* (Wadham Press, New York, 1944). Rider's main object is to draw attention to the changes in library organisation and library routine if micro-cards are introduced. In his opinion the micro-card will do away with a great many difficulties. He visualises a library where papers, journals and even whole books, printed on the back of index cards, will save librarians and research workers a great deal of trouble, time and space. Rider does not wish to see all books replaced by micro-cards, nor does he suggest that microfilm should entirely disappear. He thinks there is ample scope for each of them, and he recommends that libraries should avail themselves of every possible means which promises to facilitate research.

The subject of microprint has only occasionally been touched upon in discussions between librarians in this country, while microfilm has already caused them quite considerable headaches. The Library Association and the British Institute of International Bibliographers had the subject on their agenda at various meetings. Their main concern was the use of microfilm in libraries, including matters of filing and indexing, and above all the question of suitable reading equipment. Other aspects of microfilming have been discussed with the Publishers Association and the Society of Authors. Each of these groups is satisfied that microfilm has a mission to fulfil, but all are anxious to find for it an appropriate place in the current copyright legislation.

The position of microfilm in relation to copyright has been somewhat ambiguous because microfilm originally took the place of handwritten notes and extracts for purposes of research. The difficulties of this position were recognised in the United States in 1935. Representatives of the Joint Committee on Materials for Research approached the National Association of Book

Publishers on the subject, and as a result of their deliberations the two bodies signed an agreement fitting microfilm reproduction for research purposes into the framework of American copyright legislation. The question of micro-filming complete books presents an entirely different problem, because it cannot safely be classified as a research service proper ; nor is it, on the other hand, publication in the traditional sense.

The position of microprint is less ambiguous since its production is only justifiable for a considerable number of copies. This puts it on an equal footing with small editions of printed matter, published or re-published, which are subject to copyright legislation.

The Publishers Association in co-operation with the Society of Authors and in consultation with Aslib have last summer issued a draft agreement which was published in the *Bookseller* of July 7th, 1944. A similar, or a supplementary, agreement will be required if the technique of micro-printing is adopted in this country. These draft agreements are very helpful for the present ; but in view of the various new techniques developed during the war and the ever increasing use being made of them, the whole vast question of documentary reproduction in relation to international copyright may soon be ripe for complete overhaul.

DISCUSSION

The chair was taken by MR. EDWARD J. CARTER. In the discussion the following took part : Professor R. S. Hutton, Miss M. Wyatt, Mr. J. E. Wright, Dr. W. O. Hassall, Mr. R. L. Sheppard, Mr. C. J. Golledge, Miss L. G. Thomerson and Dr. P. S. Hudson.

MR. CARTER apologised for the time limit unavoidably imposed restricting the discussion. He suggested that a special meeting should be arranged to consider the future of Microfilm and its post-war developments.

PROFESSOR R. S. HUTTON pointed out that through reasons of security many members were unfamiliar with the full extent of the Aslib Microfilm Service. He said that when the supply of scientific and technical periodicals had been cut to a minimum through war conditions, the Americans had contemplated the establishment of a microfilming agency in England. It was then discovered that Aslib's scheme was well advanced, though handicapped by lack of equipment, and, through the Royal Society, the Rockefeller Foundation agreed to make funds and equipment available to the Aslib Microfilm Service. With this help the A.M.S., had been able to start work at once on a wide programme of great importance.

MISS M. WYATT, complimenting the A.M.S. on its development and usefulness, asked if it would be possible to have indexes of films and pages as well as volume numbers, MRS. MOHOLY agreed that this would be possible.

MR. J. E. WRIGHT, referring to Mrs. Moholy's statements on documentary reproduction, asked whether microfilm would be available for loan purposes in libraries.

DR. W. O. HASSALL suggested that rare books published abroad should be filmed, as so many of them were lost before full use could be made of them, either in transit, or because they were brought into the country by individuals and therefore did not go through the proper channels. He appealed to the members that anyone having such books in their possession should make them accessible, not jealously guard the one and only copy !

MR. R. L. SHEPPARD asked if the A.M.S. were co-operating with the National Central Library in the microfilming of books.

MR. C. J. GOLLEDGE spoke of methods of flat filing.

MISS L. G. THOMERSON mentioned the gaps in continental literature revealed since the liberation of France, and spoke of the progress that was being made by the A.M.S. towards building up the foreign libraries.

DR. P. S. HUDSON asked if the A.M.S. were limited to periodicals available in this country ; or was there any arrangement by which American journals only obtainable in the U.S.A. could be microfilmed ?

MRS. L. MOHOLY, answering questions raised, agreed with Dr. Hassall that the rare books he mentioned should be filmed, and in reply to Mr. Sheppard's query, stated that, through Aslib, the A.M.S. had been able to co-operate with the National Central Library. With regard to the American journals mentioned by Dr. Hudson, Mrs. Moholy said that the A.M.S. were trying to obtain films from America.

The Education and Status of Special Librarians

By E. R. McCOLVIN, F.L.A.

Chairman of the Aslib Education Committee

In recent years there has been a growing appreciation of the importance of research and information services, and there is no doubt that with the termination of the war there will be extensive developments in this field, which may be described briefly as the true use of knowledge.

In every profession and industry the selection and training of personnel is of the foremost importance, and particularly is this so in the case of the work of the special librarian and information officer, where so much of the development of the whole of any system depends on his specialist and professional knowledge, on his contacts with others in the same field, and on his ability to gauge and satisfy the special requirements of his organisation and public.

Before considering any particular requirements of the profession, perhaps it will be as well to view very generally the aims and scope of our work and our personnel problems. The librarian and information officer operate over a wide field, indeed, it is the whole world of knowledge as available in printed literature of all kinds, and other recorded forms. He must be capable of taking a wide view and yet also be able to assist the worker in a narrow special field. He must have a sound knowledge of book technique and the use of other information sources, and he must be able to size up quickly each problem as it comes along. Coupled with this must be a good manner with the public, the ability to find out from each enquirer what he wants, and to note the essentials of each enquiry speedily. Particularly valuable in the efficient librarian or information officer is an interest in people. The idea of a librarian as a recluse and scholar whose first interest is in his books is not one of this age. Rather must he be interested in people and their relations with information. What is required, for what purpose it is required, and by whom it is required—the special librarian should take all these considerations into account when answering a query. Unless all these questions are known the answer can only be incomplete.

Personnel enrolled in libraries can be roughly divided into three kinds. First, the suitable officer whom training and experience have equipped for his work and who finds pleasure in doing it. This is the truly satisfactory employee. Second is the person who has a certain intelligence and manner, but is not fully interested in the work of a library or information bureau, maybe because lacking knowledge of what this work is, and so develops the department only half successfully. This type of person is really more dangerous than the third—the misfits who either through ignorance or lack of interest in their work fail to be vital forces—for the half-success is often passed over as successful by those ignorant of better methods. In choosing personnel, every effort should be made to see that those selected are fitted for the work to be done by aptitude and education, and that, in the case of junior assistants, special watch is kept on their development in relation to their work, and only those retained who show themselves to be first-rate assistants. It is a commonplace which can bear repetition that good work cannot be done by poor material. This brings us to the all-important part which the management must play in the development of libraries and information bureaux. While the development of a library or information bureau will depend in no small manner on the knowledge and enthusiasm of its staff, yet the authority, whether this be of a Government Department, a local authority or a business organisation, has the power to assist or hinder the proper development of the department, and unless the management is aware of what is wanted and is able and willing to lay down the first principles on which the organisation should be run, and also is willing to

provide sufficient funds for administration and to pay good salaries, the work of the best librarian or officer will be unavailing. Particularly is it worth while stressing the importance of the management itself being aware of the best that is being done, and so can be done, in this work. One of the ways in which it is hoped Aslib is of some value is in giving management personnel this opportunity of detailed knowledge through its meetings and publications.

It was in pursuance of this policy that Aslib sent out a questionnaire. A brief summary of the replies is given below, and it is hoped that discussion on the topic at the Conference will guide our Education Committee in its work for obtaining greater facilities for the training of special library and information staffs, both by negotiation with educational and professional bodies, and by improving our own emergency courses.

Members will remember that our three questions were :

(1) Please state what qualities and qualifications you look for in appointing staff for your library and/or information bureau.

(2) Do existing educational and training facilities provide the qualifications that you need in your staff ?

(3) If not, what additional facilities do you suggest ?

The response to this questionnaire was quite good, replies coming from practically every type of library enrolled in our membership. Aslib covers a wide field, but it is doing its most valuable work and is therefore strongest in the three groups : (1) Research organisations; (2) Industrial or commercial organisations, and (3) Government departments.

From these three groups we had a sufficient number of replies in proportion to our membership of these groups to be able to say that this cross-section is representative. For libraries and information bureaux of other types, including learned societies, professional institutes, and public and university libraries, our replies were too few and too various for any useful detailed summary. This is, no doubt, firstly, because of the very specialised field covered by certain institutions and secondly, because of the fact that the qualifications demanded are outside library professional training, or again, as in the case of the public and university libraries, full facilities are already available.

Coming to a consideration of the answers to our questionnaire, what qualifications, we may ask, are desirable in the special librarian and information officer ? Firstly, it will be wise to consider this under three headings : (1) Senior professional staff; (2) Junior professional staff; and (3) Non-professional staff. The actual qualifications and work of any information bureau will depend upon its size, and in the small bureau we may have the overlapping of senior and junior assistants, but as the work expands the three divisions of professional, junior professional and non-professional should become very clearly marked.

(1) SENIOR PROFESSIONAL STAFF—The qualifications required in senior professional staff can be described under three headings : (a) General educational qualifications; (b) Specialist knowledge; and (c) Library technique.

(a) *General educational qualifications.* Great stress is laid on a good general education in all the answers to our questionnaire. A degree is very desirable, if indeed it is not essential, and the subject taken may very well be arranged so as to give the student the specialist knowledge required.

Languages are particularly valuable to the special librarian and a knowledge of French and German or Spanish is asked for by a number of our members.

(b) *Specialist knowledge.* To a large number of our members some specialist knowledge is desirable in all senior professional personnel. This knowledge can be obtained by : (1) a degree in science or commerce; (2) business or industrial experience; or (3) schooling in the organisation itself. This last method will often prove the actual practice, although as one correspondent

puts it, "the person who has undergone the discipline of study and obtained a degree, even if it is not in the relevant subject, will be the more ready to absorb this training." This essential practical training in the actual needs of any trade or group can also be obtained by working for a time in the library of a research organisation engaged on similar work. It is, therefore, to be hoped that when the University College School of Librarianship opens again, students taking the course with a view to work in a special library will, during that time, have facilities for working voluntarily in an information bureau as is the practice with those persons now who are taking up public library work. This brings us to:

(c) *Library technique.* The ideal arrangement for the person wishing to take a position on the senior professional staff of a special library or information bureau is for that person to have firstly obtained a degree covering the general subject of the special group of organisations in mind; then to have had a year's course of training at the University of London School of Librarianship under such a syllabus as given below, and further to complete the grounding in work by a "schooling" in one of the units of the special group concerned. Knowledge of any subject is not, of course, static, and the person who is going to be efficient in his work must take the trouble to keep himself abreast of the latest methods of technique by personal knowledge of other systems and by perusal of professional literature.

(2) **JUNIOR PROFESSIONAL STAFF**—We would again stress the importance of a good general education. Except for the Chief, and perhaps the Deputy Special Librarian or Information Officer, the senior grade will generally be filled from those holding junior positions, either in the same organisation or some similar body, and so in appointing junior professional staff care should be taken to appoint those likely by qualifications and by personality to be suitable for promotion. Knowledge of languages is particularly useful, and it is more important in this group for the assistant to have a good knowledge of library technique than any highly specialist knowledge.

(3) **NON-PROFESSIONAL STAFF**—This last group raises many difficult problems. There is no doubt that in the world of special libraries and information bureaux where there is so much diversity in sizes of staff, specialisation of work, etc., and so in the standing of information personnel, too many unqualified and office staff are doing work which to be done properly requires the employment of more highly skilled personnel. Last year Mr. J. G. Crowther, in his paper on Scientific Information, said: "Several of our great libraries belong to Government Departments. It seems that in some Government departments it is thought suitable that the persons who actually serve and wait upon the reader should not be educated. . . . It would seem obvious that everyone in a library from the doorkeeper to the librarian (for even the doorkeeper has to answer many elementary bibliographical questions) should have received a secondary education." With this most of us will agree. If we are to make the best of information services we must employ the proper staff. Of course there will always be certain typists and office boy or girl staff attached to each management. Still, as we hope to recruit certain of our senior professional staff from the junior professional department, so we should be able to recruit certain of our junior professional staff from our non-professional grade. The better and more efficient will be the organisation if there are no, or very few, dead-end positions.

Do existing educational training facilities provide the qualifications that you need in your staff? We come now to a consideration of present-day facilities as provided by our educational system: Secondary School, Technical College and University, and the specialist library training of the University of London School of Librarianship and of the Library Association. As purely educational and academic training, these facilities are considered satisfactory by a majority of those who answered our questionnaire. Considering the training in librarian-

ship proper it was felt that there is still much scope for development. Great Britain has now very inadequate resources. It has only one School of Librarianship. This School, attached to the University of London, was founded in 1919 and has on its Committee representatives of the Library Association. As Aslib was not founded until 1924, and it has naturally taken some time for us to attain the position we hold to-day, when we can, I think, consider ourselves fully representative of the important field of special librarianship and information office work, we are not on this Committee. With the official recognition which we have received this year from H.M. Government, Aslib can look perhaps to the University of London asking us to appoint representatives on the Committee of the School. Aslib would greatly value this further opportunity to assist in helping special library interests in particular, as the School has offered in the past, under the Directorships of Dr. Baker and Mr. Cowley, the best training so far available in the knowledge of library technique, bibliography, library resources, etc., suited for our type of library. The Education Committee has considered very recently the syllabuses of the School of Librarianship for the graduate course, extending over one year, and for the non-graduate course, extending over two years, the latter being perhaps more suited for junior professional personnel. The Committee suggests the following as two good working syllabuses for such persons as are taking up work in our sphere. As will be noticed, the alterations are rather of emphasis than of a radical nature, and we hope that arrangements can be made for such courses as soon as the School recommences.

SUGGESTED POST-GRADUATE COURSE (1 year) :

- | | |
|---|----------|
| 1. Cataloguing and indexing | 1 paper |
| 2. Bibliography | 2 papers |
| 3. Book Selection and Reference Work (including an introduction to the recording and use of statistical information) | 1 paper |
| 4. Archives of information | 1 paper |
| 5. Classification | 1 paper |
| 6. Organisation and routine of Special Libraries and Information Bureaux | 2 papers |
| 7. English Composition (including abstracting and committee work, together with the preparation of reports and minutes) .. | 2 papers |
| 8. German or Russian (compulsory) | 1 paper |
| 9. Other modern language | 1 paper |
| 10. An approved special subject offered by the student and tested by a written historical and bibliographical paper and by oral examination | |

SUGGESTED COURSE FOR NON-GRADUATE (2 years) :

First year

- | | |
|--|---------|
| 1. English composition, including precis writing, writing of reports, etc. | 1 paper |
| 2. German or Russian | 1 paper |
| 3. A second modern language | 1 paper |
| 4. Cataloguing and indexing | 1 paper |
| 5. Bibliography | 1 paper |
| 6. Classification | 1 paper |
| 7. Reference work and book selection | 1 paper |
| 8. Sources of specialised information, including methods of making the best use of the National libraries such as the British Museum, Patent Office and Science Museum Library | 1 paper |
| 9. Storing, filing, recording and indexing special material. . . | 1 paper |
| 10. Organisation and routine of special libraries and information bureaux | 1 paper |

Second year

1. English composition, including technical abstracting and outlines of committee work 1 paper
2. German or Russian 1 paper
3. A second modern language 1 paper
4. Cataloguing and indexing 1 paper
5. Bibliography 1 paper
6. Classification 1 paper
7. Reference work ; searching and preservation of archives .. 1 paper
8. Organisation and routine of special libraries and information bureaux 1 paper
9. "The tree of knowledge," e.g. the explanation of the organic development of the Arts and Sciences into more and more specialised divisions, such as chemistry from alchemy, and social sciences from mediaeval Trade Guilds and monastic hospitals. The field of knowledge and activities covered by each division and section would be described and explained, and a survey made of the societies and other organisations, libraries, etc., and of the publications (periodicals, abstracts, textbooks, etc.) related to each 1 paper
10. An approved special subject offered by the student and tested by a written historical and bibliographical paper and by oral examination

These syllabuses aim at giving the student a training which would lay stress on the technique of the special library and information bureau, including practical use of reference books, systematic bibliography and abstracting, and the study of the literature of science, together with practical experience in the everyday work of such a service. The number of persons which the world of special librarianship is able to use is limited, yet it is increasing, and there is every reason to suppose that such courses would be well supported, both in London and in other provincial schools which may be opened after the war, if these, as is likely to be the case, are attached to Universities in our large industrial towns. Aslib would like also to see a similar or abridged part-time course for personnel already employed in the profession. If such a course cannot be arranged by our educational authorities, we have no doubt that our members will support Aslib in the organisation of some such course, similar to, yet much more detailed than, our war-time emergency courses.

Some mention must be made of the professional examinations of the Library Association. At present these are the only professional qualifications which can be studied through part-time tuition and correspondence courses. Anyone acquainted with the difficult problem of the education of the librarian must give the Library Association praise for its work in this field and for its great work in the improvement of the status and professional standing of the librarian. Aslib, however, must feel that the syllabus at present is primarily arranged to suit the needs of the municipal and county librarian. The Association is considering changes in its syllabus, and Aslib would like to suggest an alternative syllabus for those engaged in Special Libraries and Information Bureaux. Such a syllabus might very well include some of the many suggestions in the memorandum of the Reference Group (London and Home Counties Branch of the Library Association). The following are some of the subjects which it is hoped might be included in the Elementary and Intermediate Grades. These suggestions are based upon the syllabus now in use.

ELEMENTARY

(1) Literary History to be optional. As an alternative, a course giving a particular study of the English language—syntax, composition, precis writing, with some literary and stylistic appreciation and word sense—on the lines of

Fowler's "King's English," Quiller Couch, etc.; a knowledge of signs and symbols, proof correcting, abbreviations in common use, Greek and Russian alphabets, foreign phrases, etc., especially of equivalents in various languages of bibliographical words, e.g. transactions, abstracts, etc.

(2) Cataloguing and accessioning and principles of classification to be compulsory, but extend D.C. to U.D.C. and include Library of Congress.

(3) Library Administration—alternative course on technique, routine, etc., in non-public libraries and information departments, including accession and circulation of journals, practical work of shelving, loose-leaf filing, card index, vertical filing, pamphlets, series of reports, memoranda, etc., accession books, and lists, stencilling, book-binding, repairs, mimeograph, photo-print, microfilm, and filing and indexing of microfilms and use of readers. Also study of shapes, sizes, etc., of paper, books, cards, files, etc.

INTERMEDIATE

To include a paper on :

(1) Learned societies, professional bodies, abstracting bureaux, research organisations, etc.—objects, organisation, differences—their publications, e.g. difference between communications and transactions, proceedings, journals, etc.

(2) Government departmental hierarchy and official publications, e.g. command papers, S.R. and O's., Select Committees, Royal Commissions, Government Statistics, Blue Books, White Papers, etc.

(3) Abstracting, literature surveys, bibliographies.

(4) Knowledge of national, university and other special libraries and how to use them.

(5) Bibliographical tools—reference books and other sources of information, different kinds of Year Books and Dictionaries, Directories, Encyclopaedias—in various languages and subjects.

(6) Purchasing of books, placing and filing of orders, payments, book-keeping, accounts, discounts, etc., use of booksellers' catalogues and publishers' lists, cumulative bibliographical indexes, etc.

With these alterations the syllabus is very suitable for those entering special libraries at an early age.

There are also two problems, the solutions to which are likely to remain within the field of Aslib's own activities. There is the problem of the man or woman experienced in special library work, though without the orthodox library training who, being already in a responsible post, cannot take a full-time course of training. For these the Library Association's courses are not suitable, yet the efficiency of these men and women and their ability to supervise library assistants could be increased by short courses of classes, lectures or conferences with other librarians experienced in similar problems.

Since special library work enters a very diverse field in which the "common denominators" become fewer in the higher grades, it seems likely that the most effective help that can be given will always be to small groups of students drawn from libraries in similar, though not necessarily identical, work.

The second problem is that while the present policy of certain governments and business managers persists, there will be personnel, untrained in librarianship, who will be called upon to organise and administer special libraries and information bureaux, but for whom librarianship will never be a career in itself. For these, immediate aid in the form of short "first-aid" courses and the preparation of helpful manuals is urgent.

Finally, Aslib is also aware of the problem of training ex-service personnel, and we would be glad to assist the Library Association or other educational authority in tackling the task, which is one for the immediate future.

The Recruitment and Training of Special Librarians to Fit the Present and Future Needs of the Special Library Profession in the United States

BY RUTH S. LEONARD

*Chairman, Training and Professional Activities Committee,
American Special Libraries Association*

The twenty year period between the first and second World Wars brought the development in the United States of more than 2,000 well-organised special libraries which serve the informational and research needs of such diversified organisations as : banks and insurance companies ; public utility and manufacturing or industrial corporations ; trade associations and labour unions ; chambers of commerce and boards of education ; museums, schools, and universities ; research and social welfare foundations ; law and government offices ; scientific and medical societies ; airlines and broadcasting studios ; publishing houses, newspaper offices, and advertising firms.

The requirements of this war have emphasised, as never before, the need and importance of specialised library information service. Libraries and research departments in industrial and scientific concerns, in governmental departments, and in many types of business organisations, have expanded and intensified their services to meet the needs of their respective organisations. A conservative estimate of the number of special libraries organised within the last year and a half is 100, and there is no doubt that many others have been formed which have not been brought to the attention of the Special Libraries Association. The new special libraries cover a wide variety of fields, including aviation, transportation, medicine, motion-pictures, chemistry, radio, ordnance, finance, publishing, insurance, and many scientific and engineering subjects. The importance of special libraries in the post-war reconstruction period cannot be over-emphasised. The economic, social and industrial adjustments will necessarily require the services of special librarians and information specialists.

The Placement Office records at S.L.A. Headquarters indicate the increased demand for trained personnel as a result of war-time activities. In 1943, 413 openings were reported, of which 241 placements were made. From January 1st, through June 14th, 1944, there were 203 openings, of which 113 were filled. Mrs. Kathleen B. Stebbins, Secretary, S.L.A., reports that many positions could not be filled because librarians with the required subject or language background were not available or because the salaries were too low to attract experienced people. The lack of personnel for special library positions is especially apparent in the beginning positions. These figures do not include many special library positions which do not come to the attention of S.L.A., but which may be handled by library schools and various employment agencies.

The shortage of librarians now, and the anticipated shortage in the post-war period, may be shown by the following statistics compiled by the American Library Association and the Special Libraries Association as part of a general survey on demobilisation problems. The estimated figures were quoted to the writer in a letter from Mrs. Stebbins under date of July 6th, 1944 :

There are now 26,000 professionally trained librarians, of which 10,000 are now in public libraries, 5,000 in college and university libraries, 7,000 in secondary schools, and 3,500 in special libraries, with 500 in other types of libraries. Of this 26,000, 2,500 are in the Armed Forces. There is at present a shortage of about 3,300 professionally trained librarians, and after the war it is estimated that both public and special library service will be greatly expanded, making the shortage even more acute. It is estimated that 3,000 trained librarians will be needed in six years after the war for positions now vacant, and that another 2,000 will be needed for improving public library service. It is further estimated that some 1,300 to 1,500 special librarians will be needed for the six-year period after the close of the war. . . .

Such figures make the acute need for recruiting to the library profession evident, especially when one is aware also of the fact that library school enrolments have decreased sharply in the last two years. To quote Mrs. Stebbins further, "854 library school students graduated in June, 1943, as against an average of 1,400 each year for the preceding ten years."

Because of the greatly increased demand for professionally trained special librarians and the evidence that the need for special library services in many fields will continue, the Special Libraries Association has made recruitment one of its major activities this past year.* The Training and Professional Activities Committee of S.L.A. carried forward a recruiting programme which has already yielded tangible results. The Committee decided that the most direct approach to the college student was through the personnel directors, vocational counsellors, and deans of the colleges and universities. It was the Committee's purpose to provide these people with information that would correct their misconceptions and distorted ideas concerning the library profession, particularly the special library profession, so that they would be encouraged to recommend a career in special libraries to properly qualified students. Three thousand copies of the special recruiting pamphlet, *Something Special*,¹ prepared for the Committee, have been distributed. In addition, two other pamphlets, *Passing the Book*,² and *Special Librarianship as a Career*,³ have been sent to those requesting them. The response of the personnel officers showed a genuine interest in the opportunities and advantages of the special library profession, while inquiries from college students have been a source of further encouragement. The Committee has stressed the opportunities in special library work now and in the future for college students, if they combine their subject specialisation in college with one year's preparation in an accredited library school, preferably one which has a course in Special Libraries. The acute demand for librarians with specialised knowledge in the scientific, technical, and business fields who can give expert library and information service has been emphasised, as well as the vital role that special libraries play in the work of any organisation, whether it be a scientific or research institution, a museum or a professional association.

Talks given by Eleanor S. Cavanaugh, last year's President of the Special Libraries Association, and Mrs. Kathleen B. Stebbins, Secretary, Special Libraries Association, to some ten library schools have set forth the vital importance of special library work—its advantages and opportunities—with the result that many library school students have become special librarians, or are considering doing so in the future.

The difficulties of recruiting students to the special library profession are many; for example, students trained in science can now go directly into high salaried positions in industry without an extra year of preparation, and many students prepare themselves in academic fields for which there are no specific special library openings. Nevertheless, the enthusiastic response to the recruiting efforts of this past year has convinced S.L.A. that a continuation of the program is desirable. A repeated attack on the false notions of the library profession which too many students and personnel officers have, cannot help being beneficial.

*Another activity of equal importance is the "Manpower Survey" under the chairmanship of Ruth Savord. Two questionnaires were sent to each member of the Association: one called Personnel Record, and the other, Experience Record, the former covering special knowledge and skills, the latter analysing the sort of work done by the individual in different types of libraries and in various classes of organisations. The value of these data on special libraries is similar to that of the National Roster of Scientific and Specialised Personnel on specialists therein represented. Returns are coming in daily, and when a sufficient number has been received, the answers will be analysed from the coded forms. Thus the Special Libraries Association Headquarters Office will have a detailed key to special knowledge and skills and to experience of member librarians in the different types of organisations. The usefulness of this information in placement and in the development of professional status is considerable.

In conjunction with the problem of recruitment is the problem of providing adequate professional preparation for special library work. In fact, many special librarians have posed the question in the past: "Shall we advocate the development of new special libraries before we have the trained personnel to fill them—or shall we train for the profession, and leave the opportunities to be developed by this incoming personnel?"⁴ The Special Libraries Association has for many years realised its responsibility in encouraging more special libraries and at the same time has advocated the training of personnel to fill the demand. Various committees have made studies or surveys, and have sought information, by means of questionnaires, concerning what constitutes "adequate training." The qualifications necessary for special librarians, the training needed for various types of special libraries, and the need for special library courses in library schools, have all been reported in *Special Libraries and S.L.A. Proceedings*.

Henkle reports that "in much of the discussion of the educational needs of special librarians, the traditional 'basic curriculum' in library schools has been under attack, and, I need not add, with good reason."⁵ Library schools, in general, have tended to exaggerate the difficulties of preparation for all kinds of special libraries and, failing to see any "common denominators" on which to base preparation for special library positions, have thus hesitated to provide distinctly special library courses in their curricula. Adequate training, therefore, has lagged behind the demand. On the other hand, special librarians have tended to over-emphasise the differences between the educational needs of special librarians and librarians in general libraries, and are not in complete agreement concerning what constitutes the best preparation for special librarianship.

In view of this dilemma, some of the conclusions reached by Morley, Savord, and others who have given considerable thought to the problem, may be reviewed. Savord states:

. . . The overwhelming variety of subjects covered in special libraries and of types of organisations served . . . seems to have been the real stumbling block. . . . No library school could hope to offer courses covering such widely varying subjects as chemistry, religion, banking, foreign affairs, etc. But is the subject background the primary consideration in the training? To this I would say—not for the library school. Knowledge of the subject must be acquired either in pre-library school training while in college, through post-graduate work, or on the job. . . . If not subject training, then what is required? The answer is plain—*adaptation of traditional courses and methods to the demands of special library service*.⁶ (Italics mine.)

Morley states:

Most special librarians agree that preparation for special librarianship should include most of the basic courses now given in library schools . . . that some parts . . . could be reduced or omitted. It is also rather generally agreed that some additions and some different emphasis would be desirable in courses for special librarians. Few of us have given sufficient thought to the subject of training to be able to specify the most desirable curriculum.⁷

However, Morley believes that it is possible, through an analysis of the activities and problems common to many special libraries, to determine, first, what knowledge is required, and second, what skills or techniques are necessary to carry on these activities, and then to base a curriculum on these facts. Fundamental to a consideration of the activities and problems in special libraries, she believes, is the understanding of the *several types* of special libraries which she classifies as follows:

(1) Libraries which are integral service parts of non-library and non-educational organisations. (Library in a manufacturing company or library in a research foundation).

(2) Libraries which serve groups outside their own organisation. (Association library serving staff and members).

(3) Special departments of a general library. (Special department of a public library or a university departmental library).⁷

The needs of a special library course arising out of the activities and problems common to many special libraries have been admirably set forth in Morley's survey referred to,⁷ and will be merely summarised here. She has grouped the topics under Organisation and Administration, Discovery and Selection of Material, Cataloguing, Classification and Subject Headings, Organising Special Files or Groups of Material, and Information and Research Service. Under Organisation and Administration she stresses the need for knowledge of the activities and organisation set-up of such bodies as corporations, government departments, museums, associations, and research organisations; for techniques for co-ordinating library procedures to the needs of the organisation served; and for techniques for surveying an organisation. The analysis as a whole reveals "the fundamental necessity for developing ability to select, evaluate, adapt, and relate (and organise) material and data to meet needs that are peculiar to a specific situation and not common to a broad group."⁷

Another report—that of the S.L.A. Professional Standards Committee in 1940—deserves the consideration of those interested in preparation for special librarianship. The report states:

. . . It was recognised that no single set of standards could be applicable to all special libraries because of the diversity in size, objectives, subject interests, kinds of organisations served and types of service rendered. It was agreed that the type of service given by a special library is the most practical common denominator and largely determines requirements for personnel, collection, policies and operating methods.⁸

Then follows an outline of seventeen types of service of which the first eight involve supplying of "material" and the last nine supplying of "information." An analysis of this outline reveals the need for attention to "reference method" in preparation for special library service, as well as the study of specialised reference tools.

Emphasis on the types of organisations which have special libraries, methods of organising special libraries, organisation of special materials, and type of service rendered by a special library may all be considered fundamental in preparation for special librarianship.

It is assumed that the ideal preparation for administrative positions in special libraries includes subject specialisation, with one year of professional preparation in a library school which offers "special library" training. The controversy in regard to the amount of subject and language preparation needed and their relative importance cannot be reviewed in the limited time and space allotted to me. It is perhaps sufficient to say that ordinarily it is reasonable to expect that "the special librarian will have enough subject knowledge to be able to understand his (the client's) requests and to locate the information needed."⁹ The amount of subject knowledge needed may vary according to the type of organisation, the clientele served, and the type of service thus required.

In considering students qualified to enter the special library field, it would appear to be the responsibility of library school administrators to investigate carefully each student's personality, adaptability to special library situations, his general background and experience, in addition to his subject knowledge. It is important to recognise the fact that administrative and organising ability may be more important than knowledge of the minutiae of particular subjects, and that many special librarians must be information specialists in a wide variety of subjects.

Library school administrators have perhaps not been so apathetic toward the profession of special librarianship as they appear to have been. Within the last five years there has been a great increase in the number of schools offering courses for special librarians, or special subject librarians. To the best of our knowledge, there are no less than fifteen out of a total of thirty-four accredited

library schools which offer "special library" courses, and several of those offer more than one course. Library schools are seeking information from the Special Libraries Association and, in view of the variety of placement possibilities in the special library field, are engaged in re-evaluating their curricula. It is certain that additional library schools will inaugurate special library courses as soon as enrolments justify it. Ten of the fifteen library schools have courses which emphasise the organisation and administration problems in special libraries, while four emphasise preparation for "special subject libraries." These latter schools, of which the University of Denver Library School is a notable example, provide for specialisation in the literature of a particular field and for problems in the administration of special collections. The University of Denver provides, in addition, through special assignments, experience in special libraries. A few library schools give courses in particular kinds of special libraries; for example, hospital, law, and medicine. Other library schools give some attention to special library preparation as part of another course.

Lack of time and space, again, does not permit discussion of the possibilities of in-service training programmes, apprentice training, refresher courses, workshops, and various other means of providing preparation to meet the demands of the times. These have all been tried with varying degrees of success.

All signs point toward the recognition of the need for more adequate preparation for special librarianship in the future, as well as an increase in the number of qualified students attracted to the profession. It can be confidently predicted that the special library profession will prove its essentiality in time of peace as well as in time of crisis.

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DISCUSSION

The chair was taken by MR. C. LE MAISTRE, C.B.E. The following took part in the discussion: Dr. W. Bonser, Dr. P. S. Hudson, Sir Frederic Kenyon, Mr. W. C. Berwick-Sayers, Mr. G. K. Wilkie, Mr. D. V. Arnold, Mr. B. Fullman, Mr. W. T. Cooper, Miss D. Herz, Mr. J. E. Wright, Miss F. M. Buss, Miss E. M. R. Dittmas, Mr. E. J. Carter, Mr. A. B. Agard Evans, Mrs. L. Moholy, Mr. E. Lancaster-Jones, Miss A. M. Mostel and Mr. F. Greenaway.

On the Chairman's invitation, MR. MCCOLVIN summarised his paper. In the absence of Miss Leonard, Miss F. Dorsey said that, although not qualified to introduce her American colleague's paper, she would do her best to answer any questions upon it.

MR. C. LE MAISTRE asked for a definite resolution to which the discussion could be directed. A Resolution was proposed by Dr. W. Bonser and seconded by Dr. P. S. Hudson: That this meeting requests the Council of Aslib to consider entering into negotiations with the University of London School of Librarianship and the Library Association with a view to co-operating in a suitable syllabus to meet the requirements for the education of Special Librarians.

DR. BONSER said that no mention had been made of the provinces. Machinery was necessary for the teaching of Special Librarianship in the provinces as well as in London. The Universities had considered that they could not include the teaching of Special Librarianship in their post-war curriculum, and it was therefore in the hands of the Technical Colleges. He considered that the wider basis of a university education was necessary, and that technical education was insufficient. The Chairman asked whether the syllabus would be the same, and Dr. Bonser replied that it would be.

SIR FREDERIC KENYON said he believed this question had not been recently before the University Grants Committee. Before the war the question of additional schools of Librarianship had come up for discussion, and the question was raised as to how many librarians needed to be trained per annum and whether the University of London School of Librarianship did not meet the whole need at the time. The Library profession would have to press for more Schools of Librarianship if they were needed, and that was a matter for the Library Association rather than Aslib. Formerly it had been suggested that the need could be met by one other school of Librarianship in the North of England. This suggestion might be revived by Aslib.

MR. W. C. BERWICK-SAYERS, speaking as Chairman of the Executive Committee of the Library Association and of the Post-war Education Committee, said that the matter was under consideration by the Library Association. He had had several interviews with the University authorities and had been assured that, in the clutter of business they were bound to have after the war, they would be unable to add vocational training any further to the curriculum. The Association of Technical Colleges had therefore been consulted as to what could be done and they were willing to establish whole-time courses in librarianship. It was hoped that the University of London School of Librarianship would be re-opened next year. This would serve for the training of Special Librarians and to provide tutors for the provincial centres. The Library Association was completely re-casting its syllabus, and everything in Mr. McColvin's paper had already been provided for, including the U.D.C. Anyone who took charge of a library must be primarily a librarian. The Library Association were willing to work with and for Aslib to forward in the best possible way the training of Special Librarians.

DR. P. S. HUDSON agreed with Mr. Berwick-Sayers that those in charge of libraries must be trained librarians, but in Special Libraries there were also information officers who must be in charge of information. Training in their special subject was essential, but they must have some training in librarianship. The Committee felt that there were gaps in the provision for training the information officer himself. To run a scientific information bureau the person in charge must be a trained scientist in that branch of science. The trained specialist would not immediately fit into an information bureau without some extra training. He felt that Aslib could graft on these further qualifications by providing for post-graduate courses in librarianship for specialists.

MR. G. K. WILKIE considered that care was needed in extending training in Special Librarianship. It would be a bad thing to form too many centres, and he would not like to see it extended to technical colleges. He thought it should be reserved for two or three universities, e.g. London, Birmingham and one in North-West England, otherwise there would be a shortage of adequate tutors. One librarian could not possibly teach every branch of librarianship. A point which needed stressing was that librarians were, in fact, information officers. Librarians were the first people to go into the question of providing information and had been doing so since 1850. There was no reason why an information officer should not be a librarian and vice versa. Let the information officer take a course in librarianship, and let librarians take a special course on information.

MR. D. V. ARNOLD said that, as a scientist and a librarian, he wished to support the last two speakers. The information officer should know something about librarianship or else have a librarian in his department. Information officers had in the past given papers on their systems for handling information which displayed complete ignorance of the principles of librarianship. He considered library training essential. A qualified librarian should be able to find information.

MR. B. FULLMAN suggested that an information officer's business went far beyond librarianship, and if an information officer had not the time to deal with matters adequately himself he should employ a qualified librarian. No librarian could supply information in a highly specialised organisation. The librarian's job was to collect all the material in a form in which it could be produced very quickly, but he was not necessarily capable of giving advice to technical people.

MR. W. T. COOPER said that Miss Leonard's paper revealed a complete lack of any settled plan for the training of librarians or information officers. In his view, the best way was the way in which a journalist learnt his job, which was, to begin as a reporter and work under an editor. An information officer should begin as an apprentice and work under an information officer. Certain types of minds had a flair for information work. Would it not be possible for a boy or girl of good general education to have training in a Special Library and obtain the necessary wider education by means of evening classes? It was difficult to lay down a rigid curriculum.

MISS D. HERZ asked if the resolution provided for people who held no qualifications in librarianship, but were working in Special Libraries. Was it necessary to propose an amendment to cover such people? Dr. Bonser explained that an information officer was a

specialist with a bent towards librarianship. He should have as many attributes of librarianship as possible. Dr. Hudson added that when he had seconded the resolution he had intended that it should be sufficiently wide to cover non-librarians. The Chairman ruled that the resolution would not preclude the training of such people, although it was not actually mentioned, and he did not consider that an amendment was necessary. Mr. Berwick-Sayers said that the scope of the resolution would be thoroughly understood by the Library Association, and the problem was before them. He agreed entirely that no librarian should give technical advice to experts.

MR. J. E. WRIGHT, speaking as an Information Officer of twenty years' standing, considered that anyone who was a technician first and knew all the practical side of the work would be unwilling to take any course on the subject.

MISS F. M. BUSS said that the job of a librarian in a technical library who was not an expert technician was to know who was the expert who could supply the answer to any enquiry.

MISS E. M. R. DITMAS explained that it had been realised that in an organisation where there were librarians and information officers it would be a great help if the librarian were sufficiently aware of the difficulties of the information officer's work and vice versa. The information officer could ensure that some of his juniors took the library course, even if he himself had not time. Mutual appreciation of difficulties and technique would be obtained, and the danger of each Special Library developing too much along its own lines would be avoided.

MR. E. J. CARTER pointed out that information officers were dealing with an emergent technique and were realising that the methodology of their subject was something which could be taught; if they were too old themselves they could see that their juniors were taught. The methodology of Special Librarianship should be tackled by the University and the Library Association. But mere methodology was not sufficient. Librarians and information officers must be as cultured and well-educated as possible: languages and general education must be added to methodology.

MR. A. B. AGARD EVANS stressed the importance in Mr. McColvin's paper of Special Librarianship being recognised as a vocation. His experience with students led him to believe that only a few exceptional people really knew their vocation at 18 or 20. A young man reading physics, chemistry or engineering would seldom decide deliberately to take a year's post-graduate course in librarianship with the prospect of a not very well-paid job at the end of it. The usual course was for the young research worker to be drawn to the work. It was better so, since, as a librarian must be all things to all men, it was well to have a varied background of experience. Therefore, all concerned had to beware of laying too much emphasis on the full-time post-graduate course and must pay due attention to the need for satisfactory part-time study.

DR. W. BONSER asked if the syllabus given in the paper was covered by Mr. Berwick-Sayers' Committee.

MRS. L. MOHOLY suggested that the various methods of documentary reproduction might be included in the course for Special Librarians.

MR. E. LANCASTER-JONES remarked that Mr. McColvin's paper dealt with the status as well as the education of Special Librarians. Status was something which Special Librarians themselves had to establish. There was the danger of getting a combination of the indifferent technologist and the indifferent librarian.

MISS A. M. MOSTEL said that recently she had required a junior assistant, and had approached three head mistresses; all asked what chances did the profession offer. She felt it was a weakness that a girl starting in a Special Library did not have the same advantages of apprenticeship as in a public library, and that the status of Special Librarians would be improved if training in a Special Library were recognised.

MR. F. GREENAWAY, speaking as an ex-schoolmaster, asked whether Special Librarianship was in the future going to be a profession which could be recommended. At present most people dropped into it by accident. There was no recognised qualification of a Special Librarian. Had the term "Special Librarian" ever been defined? Did Aslib itself know? He suggested that Council be asked to undertake an enquiry to find out from members what they did. He considered that a scientific or technological degree plus librarianship training was essential.

MR. LE MAISTRE thanked the authors of the papers for their valuable contributions. He then put to the meeting the resolution (see above, page 75), which was carried unanimously.

The following communication has been received since the Conference from Mr. C. J. GOLLEDGE, Librarian, Marconi Instruments, Ltd.: "*Dr. Hudson represents a bureau to which information is sent on one subject, and Mr. Berwick-Sayers a library which caters for the proletariat in a general way. Ruling out the larger libraries which are really general in scope, Aslib was founded to meet the needs of small (often one-man) departments which need information in very narrow fields, and this is where they differ from the two already named. They have to go outside their own organisation to get it quickly, and can never tell where the applications of their own products may lead them. These are the true information officers.*"

Some Aspects of a new Technical Information Service in War-time

By A. B. AGARD EVANS, M.Sc., A.R.I.C.

*lately Records Officer to the Research and Experiments Department
of the Ministry of Home Security*

Summary. Some of the problems (*a*) arising in creating and running a new library, and (*b*) peculiar to war-time conditions, are discussed against the background of the Records Section of the Research and Experiments Department of the Ministry of Home Security. They include search for initial material; shelving and organisation; buying books; replacing missing parts of periodicals; a numerical classification system for abstracts; co-operation with other sources of information; photographic copying in lieu of borrowing; co-ordination of unpublished material. Appreciative reference is made to the co-operative spirit in the library world.

It is the practice in certain religious movements for a member to make public confession of his sins. It is in such a role that I have been cast to-day; to relate certain of my experiences that others may be stimulated to describe their difficulties and their methods of overcoming them. There is nothing novel in my story; much of it is common ground to many another special library, official or unofficial, new or established, in war-time or in peace.

Formation—The Research and Experiments Department of the Ministry of Home Security (then the A.R.P. Department of the Home Office) came into being in February, 1939, under the Chief Adviser, Dr. R. E. Stradling, then Director of Building Research. The Records Section (R. and E. Records) was part of the initial organisation, to be a special library and information centre. The main subjects in the earliest days were: H.E. bombs, blast, ballistics, fragmentation and penetration; incendiary bombs and fire generally; chemical warfare from the sky; and, above all, building and strength of materials. To these were soon added: lighting and black-out; physiological and psychological effects; camouflage and paint; window protection; location of industry and population; sirens and warning systems; and a host of subjects of which some knowledge was necessary as a background for technical advice on air-raid protection.

Sources of material—At first sight the task seemed formidable, especially in the face of the terrible urgency of the time. The formidability was, however, more apparent than real. I do not suppose that there ever occurs the full problem of setting up a new library on a new subject in a new department. First, the A.R.P. department, since its formation in 1935 under Wing Commander (now Sir John) Hodson, had assembled and used a great deal of technical information in its various branches, particularly that of the Chief Engineer; professional institutions and trade associations had had A.R.P. under close review; the Service Departments had information on weapons and fortifications; lastly, but very importantly, the Building Research Station (B.R.S.) Library, under F. L. Shipman, had for several years accumulated a large number of references and abstracts on A.R.P., mostly from the foreign technical press.

Immediate steps were taken to assemble reference books, periodicals, published papers and unpublished reports bearing on the various aspects of Civil Defence. The collaboration of the records officers of the three Service Departments, other Government Departments and of technical institutions was secured. From these sources material of all kinds began to flow in to the R. and E. Branch. The setting up of the Civil Defence Research Committee in May, 1939, gave a further focus for information, publications and ideas.

Shelving—The possibilities of shelving and subject indexing by one of the formal classification systems were considered. A real difficulty here is that A.R.P. is not philosophically a pure subject; the groupings of the literature by Dewey would not bring items into the juxtaposition desirable from the special viewpoint. Also, extensions for A.R.P. had not been worked out. For these reasons and because of the close relations between R. and E. Records and the B.R.S. Library, it was decided to adopt the system common to many of the Stations of the Department of Scientific and Industrial Research (D.S.I.R.), namely: books shelved under broad subject headings; pamphlets by country and by institution; periodicals alphabetically by title. The whole is served by an author catalogue and a card-per-entry, alphabetic, subject index.

I may say here that in my newest venture, the Ministry of Works Library, I have adopted U.D.C. for shelving the books.

Buying Books—One difficulty in buying books in war-time is that one can no longer get them on approval. The early notices of books are usually not so reliable as the sound and considered judgment of Aslib or *Nature*. But since they quickly go out of print, they have to be ordered early; the research men want them early, too. The result is that one has to take chances in ordering. It would be of great value to librarians if the publishers would set up a joint central library of new technical books; a place where they could be inspected with a view to purchase through the usual channels.

Periodicals—The drastically restricted editions of technical periodicals is a really serious problem for new services. Apart from that a most exasperating feature is the difficulty of replacing lost or undelivered parts as a preliminary to binding. Accidents happen in the best-regulated families and, in spite of the greatest care parts are apt to be missing. I suggest that Aslib set up a register of wanted parts. These would be advertised in the *Bulletin*; libraries and individuals who do not bind the periodicals would probably be willing to supply them. A small surcharge would offer an inducement to the seller and provide a commission to Aslib.

Abstracts—A point of great importance was that, although much of the data needful for Civil Defence was available, it had not previously been co-ordinated. For this purpose, in collaboration with the B.R.S. and the Intelligence Branch of the Home Office, all important papers, published and unpublished, were abstracted and rotaprinted in single sheets. Each abstract was given its appropriate number in an agreed numerical subject classification. When filed, the abstracts formed a cumulative classified digest of the A.R.P. technical information. Complete or selected sets could thus be assembled in many places simultaneously. They were distributed to the sub-libraries (see below) and other Divisions; to Home, Empire and Allied Government Departments and interested professional institutions. The sections are annotated bibliographies on their aspect of the subject and can be handed out to an inquirer without any delay.

It must be admitted that such a classification is difficult to draw up satisfactorily in a subject which is liable to expand in unexpected directions. Two sections had to be revised, with all the tediousness which is involved in renumbering past abstracts; and there are one or two other sections which would not stand up to hostile criticism. In spite of the snags, I believe that the method provides a most valuable tool and is very well worth while. Dewey gives a superficially similar result, but there is a lot to be said for grouping your material under broad headings especially adapted to your own users' needs.

Inquiries—The sole purpose of a special library, or indeed of any library, is to answer questions. It is my belief that this part of the library's work should be under the personal supervision of the librarian; all inquiries and their answers should be referred to him at an early stage, so as to ensure that the whole resources of the library are brought to bear. Questions of extremely varied nature were asked. They ranged from the strength of steel cables to population densities; from the toxicity of carbon dioxide to the life cycle of a

mosquito. No library can hope to assemble all the material required. When the normal reference books and indexes of the library failed, likely sources were tapped. D.S.I.R., with its wide range of laboratories and research associations was extremely valuable. Use was made of other Government Departments, professional institutions, trade associations, public and private libraries and individuals. The numerous special libraries of comparatively recent growth provide pools of information which can be drawn upon rapidly and with little formality, especially through the good offices of Aslib.

It has been said recently¹ "Britain owes her survival as much to her scientists as to her soldiers in this highly mechanised age." It may fairly be added that the part played by the libraries in making this scientific information available in digestible form is a contribution to the war effort of the United Nations, of which we may all be sincerely proud. My experience as a debtor librarian, of the generous response of libraries of all sorts is common to many other Departments vitally concerned with the war. Time and again an enormous amount of time and trouble was spent in satisfying my requests, by librarians who were short-staffed and who could not hope for a quid for their quo. This lend-lease spirit, this freemasonry among librarians, is a living force in the world of information and one which is of inestimable benefit to all mankind.

It is perhaps invidious to select a few from the several hundreds who have helped, but I should like to take the opportunity of paying a special tribute to the generous help of the Patent Office Library, the Science Museum Library, the British Library of Political and Economic Science and, above all, to the R.I.B.A., which has responded unflinchingly to demands sometimes verging on the outrageous.

Photographic copying—In 1940, a library service was needed for camouflage and smoke. The literature is sparse and widely scattered and, living up to its name, most of the material bears little superficial connexion with camouflage as a subject; neither is it catalogued nor indexed as such in libraries or journals. Selection followed the usual lines in such circumstances and a number of contributory subjects were traced back through abstract journals and indexes. The result was a small but useful collection of relevant material. I am not very sure how far copyright interferes in normal times, but I should like to see an end to the loan of heavy bound periodicals and substitute in every case a photostat or microfilm of the article. It adds a permanent accession to the borrowing library and does not deprive the lending library of its reference material. For this purpose microfilm does not appear to be the ideal medium in every case.

If I may digress for a moment, a suggested application of microfilm is the bedside reader, which projects the matter on the ceiling; the pages can be "turned" by a normal camera shutter cable held beneath the bedclothes.²

Fire library—In January, 1942, the Fire Research Division of the Department moved its headquarters. The literature on Fire was separated out from Records, and, again with the valued assistance of the B.R.S. Library, a special Fire library or branch of R. and E. Records was set up. It has been nursed by R. and E. Records for over two years, but progressive steps have been taken towards its independence, so that it may be in a position to make a contribution to the application of science in peace-time. In this connexion our classified collection of abstracts was particularly useful; two volumes of "Fire Abstracts" have been prepared, totalling 550 abstracts taken from the central pool of A.R.P. abstracts. In charge of the Fire Records Section is Miss A. Holroyd, who shared the fun and the headaches of R. and E. Records with me for more than five years.

Other activities—A number of extra-mural projects were serviced from the central Records, such as the development of luminescent materials, physiological effects of blast and splinters, and one or two others.

¹ A. M. Low. *Britain To-day*, 1944 (99) (July), 11.

² See also Mr. Agard Evans' comment, and footnote, on page 81

A major activity has been the preparation of summaries and an analytical classification of technical reports on air-raid damage, which run to several thousand; this work is digressive for the technical sections. Collections of slides and photographs have been assembled with fully documented captions, partly to serve as training and study material and partly with a view to historical technical record. The slides are roughly classified and provided with a subject index. The photographs are mounted on 8in. by 5in. cards, filed by Civil Defence Regions and provided with a subject index.

Unpublished material—I have referred mainly to the published literature as being of most general interest. The larger part of the work has naturally been concerned with unpublished material in various categories of security. Nothing could demonstrate more clearly the enormous value of the work of publishers and of existing library "aids," than having to work with these unpublished papers. Various inter-departmental methods are in use for dealing with the problem, but in spite of the best that we have been able to do, we are still far short of the comparative facility and certainty with which published matter is handled.

Whenever the question of improvement of channels of world information is under discussion, the very great progress already achieved in the field of documentation should not be overlooked.

DISCUSSION

The chair was taken by SIR HUGH BEAVER. The following took part in the discussion: Mr. P. HUNOT, Mr. M. H. WATERFALL, Miss B. SCHAFER, Mr. LANCASTER-JONES and Mr. G. A. SHIRES.

SIR HUGH BEAVER said that he had a double reason for satisfaction at being asked to preside at this session. In the first place he had discovered that, with Professor Hutton, he was the oldest member present, having attended the first Aslib Conference in 1924. Secondly, the Ministry of Works had recently appointed Mr. AGARD EVANS to take charge of their Library, and he now had the opportunity to learn what kind of a choice they had made.

Introducing his paper, Mr. A. B. AGARD EVANS said that he must add two points to the printed text. First, when he described the microfilm bedside reader (page 80) he had intended it as a joke. Three days ago, however, he had described it to a wise old gentleman, who asked whether it was in production, as it would be a great boon to patients in hospitals. A few minutes ago, Mrs. Moholy had shown him a photograph of such an instrument in actual operation in a hospital.¹ He hoped it would be widely available.

Secondly, he had been asked to say a few words about the Ministry of Works Procedure Chart (page 82) on exhibition in the outer room. It had caused a number of remarks, some of them humorous. It was, however, a sincere attempt to enlighten the uninitiated—especially establishment officers—in a short time, as to what was involved in a library; that it was not merely a case of ordering a book and signing the invoice correctly. This was an attempt to portray the essential digestive process, if the good food in the form of literature were to become the life blood of the organisation.

MR. P. HUNOT asked what procedure was adopted in connection with loans to the Fire Force Areas. Mr. EVANS replied that such loans were not the concern of the Fire Research Division but of the Fire Service Department.

MR. M. H. WATERFALL believed that the spirit of co-operation stressed by Mr. EVANS was more pronounced among librarians in the field of research than among librarians in the commercial field. He asked if the U.D.C. could be made available for use here; he understood that the B.S.I. had this in hand.

MISS B. SCHAFER asked if the U.D.C. were available in any other language.

MR. LANCASTER-JONES stated the present position with regard to the available issues of the U.D.C. in French and German. A translated French edition, with supplements belonging to the Science Library, had been placed at the disposal of the B.S.I., and the preparation of an English edition by the B.S.I. was in progress. A series of draft copies would soon be

¹ *New York Times*, New York, N.Y. 94, September 23rd, 1944, p. 15. Bedridden battle patients at Percy Jones General and Convalescent Hospital now read books, magazines and comic strips off the ceiling, with only a flick of the finger. A new device, resembling the still picture projector used in the home, rests on the floor beside the bed. A cord with a push button on the end extends to the patient's hand. By pressing the button the patient turns on the light and reads page one as projected on the ceiling. The image is about two feet long and eighteen inches wide. With the flip of a switch the patient turns the film to page two, three, etc., of reading matter photographed on 35 mm. microfilm.

available in sections. He thought Mr. Evans' suggestion that Aslib could help librarians to fill gaps in periodical collections was not practicable. The Wilson periodical service was very useful and, alternatively, publishers were often willing to insert advertisements in the periodical. Mr. Lancaster-Jones said he had had no difficulty in obtaining books on approval during war-time. He congratulated Mr. Evans on the Procedure Chart. By experience he knew how difficult it was to represent in graphical form the idea that there was more to library work than ordering books and certifying the invoices.

Miss SCHAFER said she had found the Wilson Periodical Service very helpful. Referring to the suggestion that publishers be asked to insert advertisements, Mr. HUNOR said that this was not often successful.

Mr. G. A. SHIRES asked for fuller details about the procedure with unpublished reports and particularly as to filing them. He found the Procedure Chart most helpful and would attempt a similar anatomical specimen for his own organisation. He inquired whether, where Mr. Evans had used the term "librarian", he did not really mean information officer.

Replying to comments and questions, Mr. Evans said there were not many points to answer. He was grateful to Mr. Lancaster-Jones for the information about the availability of the U.D.C. drafts from the British Standards Institution. These drafts, when complete, would really serve all reasonable requirements until the complete edition was available. He did not wish to enlarge very much on the subject of unpublished information. Most of the Departments concerned, the Ministry of Supply, the Ministry of Aircraft Production, etc., issued lists of available reports under the appropriate security category and to suitable Departments. As for filing unpublished material, this presented no difficulty to his own library, which treated them as pamphlets and, as such, gave them the location numbers based on the originating body. They were then filed in steel filing drawers or boxes.

In a communication received after the Conference, Mr. AGARD EVANS has written :

"In reply to Mr. Shires' question as to whether I meant librarian or information officer, I am afraid I make no distinction in the terms. I was librarian at Road Research Laboratory, Records Officer at Home Security, and am now Technical Intelligence Officer and Librarian at Ministry of Works. But the work and the duties are essentially the same, whatever the title."

Social Occasions

The formal proceedings of the Conference were preceded on the Friday evening by a *Conversazione* held at the Royal Institute of British Architects through the kind permission of its Council. Over 128 members and guests were present, and the occasion gave welcome opportunities for the renewing of acquaintances made at earlier Conferences, as well as for the making of new contacts.

A further innovation at the 1944 Conference was the luncheon held at Chez Auguste on the Sunday, when 185 members were present, with the President, Sir Frederic Kenyon, as the guest of honour. This, together with the *Conversazione* at the R.I.B.A., gave an opportunity for social gatherings of the members which in some small measure made up for the drawbacks inevitable in the case of a non-resident conference.

Following the lunch the General Secretary spoke of the progress of Aslib and the tremendous significance of the change that had taken place since the 1943 Conference. In 1943 work and development had been hampered on every side by lack of funds, lack of accommodation and, as a consequence, lack of staff to undertake those projects for which there was great demand. Fortunately Aslib's potential value had been recognised, and shortly before the 1945 Conference, Aslib had received the promise of a Government grant which would increase in proportion to the increase of subscriptions received from British members. A move to larger premises was already in sight, and with it the possibility of an increase in staff. This happy result had definitely arisen through the confidence in Aslib expressed by members at the 1943 Conference, which had encouraged the Aslib Council in their decision to raise the subscription rates. Without this breaking of a vicious circle, Aslib's income could not have reached the minimum at which the government grant could become operative. Thus the chief credit for the present state of affairs must ultimately rest with those members who, knowing Aslib's record of work under difficulties,

had faith in what it might become with adequate financial support. The membership as a whole had responded nobly, and there had been remarkably few resignations.

The General Secretary went on to speak of the productive side of Aslib's work during the past twelve months. She admitted that the output in publications was not yet up to expectations, but reminded members that the change over to wide responsibilities necessitated a period in which staff could be trained and the office reorganised. Nevertheless, the foundations of many projects had been laid whose results would begin to be evident during the coming months. Some activities, such as the publication of Mr. Wright's *Manual on the Technique of Special Librarianship*, had been delayed by printing difficulties, the kind of obstacle with which all members were familiar.

The General Secretary closed her speech with renewed thanks to the whole body of the membership, through whose faith and support Aslib now had a good chance of going forward to do those tasks which opportunity would present, both in time of war and in the still more important period of reconstruction that would follow.

DISCUSSION

MR. E. N. SIMONS stressed the importance of developing Aslib membership, and wondered whether the industrial field had been sufficiently explored. He thought the method of approach to individual firms was too slow, and suggested that the Association of British Chambers of Commerce be approached and asked to send a circular letter to the various Chambers of Commerce throughout the country, pointing out the advantages of Aslib membership to their members.

MR. F. HUGHES urged that Aslib members themselves should all introduce new members. PROFESSOR R. S. HUTTON, speaking as an old member, deplored the loss of so many old members, and suggested that the new Public Relations Committee should get into touch with former members to find out their reasons for resigning and try to persuade them to re-join. He thought that, where the representatives of some organisations had changed, membership had been allowed to lapse. Also, he had found on enquiry sometimes that people held quite erroneous views about Aslib, and thought, for example, that membership entailed supporting the U.D.C.!

MR. G. K. WILKIE, speaking as a new member, said he was very impressed with the enthusiasm of Aslib's members. He suggested that co-operation among the public, commercial and smaller libraries was very desirable.

MISS M. EXLEY said that in Sheffield there was a very real spirit of co-operation. They had a group of twenty three members, including the Chamber of Commerce and many large firms, all very willing to help one another without any spirit of jealousy.

MR. W. C. BERWICK-SAYERS mentioned that in Croydon also such a scheme was in existence; the Chambers of Commerce had desired to become members and a Committee of Chambers of Commerce had been formed to advise librarians. He congratulated Miss Ditmas on the success of the Aslib conference.

MR. F. GREENAWAY, speaking as an ex-service man, said that in his opinion Aslib more than any other society stood for intellectual co-operation. The millions of ex-service men yet to return would welcome such co-operation. Aslib should devote some of its activities to promoting further intellectual co-operation, and so contribute to a better world.

The Discussion having ended, MR. E. J. CARTER proposed votes of thanks to the President and Council of the Royal Society for the use of their premises, to Miss Ditmas and the Aslib staff for their work, and to the Manager of Chez Auguste.

Report of the Nineteenth Annual General Meeting

The Nineteenth Annual General Meeting of members and associate members was held at 10.30 a.m. on Saturday, September 16th, 1944, at the Rooms of the Royal Society, London, W.1.

Present: Thirty-four members and associate members were present.

Chairman: Professor R. S. Hutton, D.Sc., M.A. (President of the Association) acted as Chairman of the Meeting.

ITEM I. Minutes of the Last General Meeting

The Minutes of the Eighteenth Annual General Meeting, having been printed and circulated in the Report of the Proceedings of the Eighteenth Conference, 1943, were taken as read. It was agreed unanimously that they should be confirmed and signed as correct by the Chairman.

ITEM II. Audited Statement of Accounts, 1943-44

The Audited Statement of Accounts, which had already been circulated, was presented by the Honorary Treasurer, Mr. E. Lancaster-Jones. The Honorary Treasurer briefly analysed the Accounts, and after some discussion their adoption was proposed by Mr. A. A. Gomme, seconded by Miss G. E. Lockie and carried unanimously.

ITEM III. Election of Council

The Chairman drew attention to the following eight members of the Council who were due to retire by rotation under Article 25 of the Articles of Association: Mr. B. C. Curling, Miss B. M. Dent, Mr. A. Farquharson, Mr. John Hampden, Major C. W. Hume, Mr. F. C. Mitchell, Mrs. C. S. Orwin, Mr. C. A. Spencer. Of these, the following were not seeking re-election: Mr. B. C. Curling, Mr. A. Farquharson, Major C. W. Hume and Mrs. C. S. Orwin. The Chairman recorded the thanks of the Association for the great services they had rendered in the past. The following nominations to the Council had been received:

Miss M. Couldrey, B.A. (Imperial Chemical Industries, Ltd.).

Mr. A. B. Agard Evans, M.Sc., A.R.I.C. (of the Ministry of Works and Buildings).

Mr. T. M. Herbert (London, Midland and Scottish Railway)

Mr. H. Hyams (Asiatic Petroleum Co.)

Mr. E. N. Simons (Edgar Allen and Co., Ltd.)

and, in addition, the Aslib Council had nominated:

Miss A. M. Mostel (Woodall-Duckham Vertical Retort and Oven Construction Co. (1920) Ltd.) who had acted as Honorary Secretary to the Publications and Editorial Committee; and

Dr. R. S. Schultze (Kodak, Ltd.) Honorary Editor of the *Aslib Book List*.

Since the list of nominees had been circulated with the Agenda, the Chairman suggested that the elections and re-elections should be taken *en bloc*. The proposal was carried unanimously.

ITEM IV. Election of the President and Honorary Officers

On the proposal of the Chairman it was unanimously agreed that Sir Frederic Kenyon, G.B.E., K.C.B., should be elected as President for the ensuing year, that Miss I. Shrigley should be elected as Honorary Secretary, and that Mr. E. Lancaster-Jones should be re-elected as Honorary Treasurer.

ITEM V. Election of Auditors

It was proposed by Miss Gosset and seconded by Miss M. Shaw, that Messrs. West and Drake should be re-elected Auditors of the Association until the next Annual General Meeting. The proposal was carried unanimously.

ITEM VI. Report of the Year's Work of Aslib

The General Secretary briefly summarised a Report of the Year's Work of Aslib, now printed in full on pages 10-12. In particular, she drew attention to the Government's decision to recognise Aslib's value as a link between sources of information in Government, research and industrial organisations. This would take the form of a grant administered through the Department of Scientific and Industrial Research and proportionate to the sum received in subscriptions from British members of the Association. The grant would take effect as from July 1, 1944, so that the results of a move to larger premises and the expansion of the staff thus made possible would not be felt within the year under review. Nevertheless, the promise of the grant, coupled with the support from members who, in the great majority of cases, had agreed to the higher rates of subscription which came into force on January 1, 1944, gave every cause for hope as to future progress. Other notable items in the Report were the start of work on the British Union Catalogue of Periodicals, which was being financed through the generosity of the Rockefeller Foundation, and the continuation of the emergency courses in Special Librarianship.

The Report was presented and carried unanimously. The Proceedings were then closed.

ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX.
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 30TH JUNE,

[illegible]

BALANCE SHEET — 30TH JUNE, 1944.

[illegible]

REPORT TO THE MEMBERS OF THE ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX.

We have audited the above Balance Sheet and have obtained all the information and explanations we have required. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the Association's affairs, according to the information given to us and as shown by the books of the Association.

Sardinia House, 52, Lincoln's Inn Fields, London, W.C.2,
22nd August, 1944.

(Signed) WEST & DRAKE, Chartered Accountants.

REPORTS

THE BRITISH COUNCIL AND THE EMPIRE CONTRIBUTION TO THE FLOW OF WORLD INFORMATION¹

Although much of the Council's work in the Empire is as yet still largely exploratory—the Council is at present directly represented only in Aden, Cyprus, Gibraltar, Malta, Palestine, the West Indies and West Africa—a wide range of contacts is being built up and already there is a steady flow to the Empire of information about Britain and—on a smaller but increasing scale—of information about the Empire to foreign countries.

A wide range of British and Empire periodicals is presented by the Council to schools, training colleges, Mission centres, public libraries and similar institutions in almost every part of the Commonwealth and Empire, and the Council has arranged numerous exchanges of learned and scientific journals, of which it is possible here to quote only a few typical examples: *The New Zealand Medical Journal* and the *South African Journal of Medical Sciences* both exchange with the Archives de L'Institut Pasteur; *The Journal and Proceedings of the Royal Asiatic Society of Bengal* exchanges with a publication of Upsala University (Sweden); and the Council has been instrumental in obtaining for the Imperial Agricultural Bureaux from several foreign countries, especially Latin America, publications needed for their own information services.

In the West Indies the Council has taken over a central library scheme inaugurated by the Carnegie Corporation of New York, and is supplying staff and funds to enable the Central Library in Trinidad gradually to extend its work through the Eastern Caribbean by means of Union Catalogues, stock pooling methods and inter-island loans. A similar plan is being worked out under the Council's auspices in British West Africa; a central library is being set up in each territory, serving its hinterland by means of branches, which will later act as depots for up-country travelling libraries. In both areas the Council is arranging for the training of native librarians, and it is hoped after the war that these students will be able to proceed to Great Britain on scholarship for closer study of British library technique.

The Council at present sends 4,386 copies of *British Book News*, a monthly annotated selection of recent publications, to Universities, libraries and booksellers in the Empire.

The British Medical Bulletin, published by the Council's Medical Department, is sent to 350 Empire addresses. The Bulletin comprises reviews of recent British medical work contributed by eminent authorities, together with abstracts of important medical papers, reviews of British medical books and a regular list of all original papers appearing in the British medical press.

The Council's Science Department publishes *Monthly Science News*, some 11,000 copies of which are distributed in the Empire, and *Science Comment*, which is a monthly selection of scientific book reviews, information about scientific films and scientific abstracts provided with the co-operation of the learned societies and the scientific and technical press. This department is also being increasingly used as a centre of scientific information by scientists and scientific institutions both overseas and in this country. A specialised library and information section is being built up under the direction of Mr. A. A. Gomme, formerly librarian of the Patent Office.

BRITISH UNION CATALOGUE OF PERIODICALS

Following upon the preliminary report², work on the compilation of the check-list was begun and is proceeding. That a very satisfactory rate of progress is being maintained is evidenced by the following figures up to 9th December, 1944: 47,226 slips have been written, of which 30,836 are main entries, and for these periodicals 53,252 locations have been recorded.

THE NATIONAL CENTRAL LIBRARY

The report on the work of the National Central Library for the year 1944 must necessarily be brief unless the information given in the report for the previous year¹ is to be repeated. The reason for this is that there has been no spectacular development, although progress has been steady and satisfactory in all departments. Each year the value of the service obtainable from the National Central Library is more fully recognised by those needing access to research material not otherwise available. This is particularly noticeable in the case of Government Departments, research associations, and other bodies directly or indirectly concerned with the nation's war effort; the assistance given to such bodies showing a marked increase. As in previous years, Aslib has given much help to the Library, especially in connection with bibliographical enquiries of a scientific or technical nature.

¹ See Symposium, pages 21–50

² Eighteenth Aslib Conference Report, 1943, page 67

³ Eighteenth Aslib Conference Report, 1943, page 65

Reports (continued)

CONFERENCE OF ALLIED MINISTERS OF EDUCATION THE INTER-ALLIED BOOK CENTRE

The Inter-Allied Book Centre has been evolved by the Conference of Allied Ministers of Education from the efforts of the Library Association to assist in the replenishment of libraries damaged and destroyed by enemy action. As far back as June, 1941, the Council of the Library Association asked librarians to exercise particular care not to discard any works which might eventually be of value in replacing those destroyed. Many private individuals were getting rid of their books by selling them at ridiculously low prices or by putting them into the salvage material, and matters were made more critical by the appeal of the National Salvage Campaign to people to contribute their old books to the making of pulp. Many books in their best editions were destroyed in this way, and urgent representations were made that libraries everywhere should be given the opportunity of seeing that no valuable material was destroyed.

At the end of 1942 new machinery was set up to deal with the collection of books to increase the supplies of waste paper, to provide reading matter for the services and to ensure that in attaining these two objectives valuable and useful books were not destroyed. The Ministry of Supply (the department responsible for the Salvage Campaign) formed a National Book Recovery Council, which in turn appointed a Central Committee of Scrutiny under the Chairmanship of Mr. L. R. McColvin. The Library Association had already appointed a Committee for the Recovery of Books and Manuscripts, upon which the British Museum, the National Central Library, the British Council, the Association of Special Libraries and the British Records Association were also represented. This Committee has been augmented by three representatives of the Allied Governments drawn from the Inter-Allied Book Centre Committee, and will ultimately be responsible for the detailed allocation of books.

It is estimated that about a million and a half books have been set aside for the replenishment of libraries from the Book Drives so far carried out. The number of books retained in individual districts varies greatly from a few dozen in small areas to 15,000 in large towns. They have been housed in local depôts, usually the premises of the public library of the local authority. Pressure on accommodation has always been a problem in most libraries, and few can afford to give space for an unlimited period to several thousand volumes not of their own stock. Requests soon began to come in from a number of areas asking that they might be relieved of these collections.

It so happened that at this time the Books and Periodicals Commission, appointed by the Conference of Allied Ministers of Education to consider the post-war supply of books to enemy-occupied Europe, had concluded deliberations upon the need to co-ordinate the work of the various organisations collecting books for war-damaged libraries in Europe by adopting the proposal that their allocation could best be arranged if resources were pooled. A meeting between the British bodies concerned was called by the Commission to discuss whether a "Books' Pool" could be established for the benefit of both British and Continental libraries, the distribution of the stocks to be undertaken by an impartial Committee of British and Allied membership. This was agreed, and thus the Inter-Allied Book Centre came into being. Through the efforts of the British Minister of Education, as Chairman of the Conference, a building was found and requisitioned. Staff were engaged, and a Committee, under the chairmanship of Sir Ernest Barker, was set up by the Conference to administer the work. This work will include not only the collection and allocation of books already set aside, but a new appeal to universities, learned societies, and similar bodies is now being sent out, and will undoubtedly bring in many thousands of books and periodicals.

The Book Recovery Campaign has produced a vast number of books of great importance, but the percentage of *modern* books in scientific, technical, medical and legal subjects is low, and for these works dependence on the help of learned societies and their individual members is inevitable. Of the books from the Salvage Drive about 18 per cent are literature, poetry and drama, 17 per cent history, 10 per cent biography, 9 per cent travel and 13 per cent fiction, the latter subject being represented only by recognised novelists of the best type.

A number of donations have been received from private sources, and a very large number of out-of-print and scarce works reached the Centre, including 130 years of the *Gentleman's Magazine*, over 100 years of the *Annual Register*, complete sets of the *Cambridge Modern History*, Strickland's *Lives of Queens of England*, many first editions of considerable intrinsic value and a considerable number of sixteenth and seventeenth century books rarely met.

Altogether there will be about 150,000 feet run of shelving giving accommodation for about a million and a half books; shelving for about 500,000 books is already in place. Books are now coming in in great numbers, as fast as they can be dealt with by the staff. About 120,000 volumes have now been shelved, in addition to large numbers of scientific periodicals in sets or parts. As they arrive they are submitted to a final scrutiny, and are then systematically classified and arranged on the shelves in their particular subjects.

It is the intention of the Committee to give priority in allocation to war damaged libraries in this country. The British Museum will have first choice and the National Central Library will have second priority. The Allocation Committee consists of representative librarians together with representatives of Allied countries. The needs of liberated countries in regard to libraries and books cannot be determined with any certainty until enquiries on the spot have been made, but every endeavour will be made to get a representative selection of English literature into each country as soon as the European phase of the war has concluded.

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The 1945 Aslib Conference

will be held

during the week-end 15-16 September 1945

at

the Polytechnic, 309 Regent Street
London, W.1.



*Members are urged to reserve their
own accommodation well in advance*



The formal proceedings of the Conference will open on the Saturday morning, September 15th, but it is hoped to arrange an informal gathering of members on Friday evening, September 14th. The Committee greatly regret that it has proved impossible to get suitable accommodation for a residential conference in 1945 but lunch and tea will be available at the Polytechnic on Saturday and Sunday and a room will be at the disposal of members for informal gatherings between and after meetings.



*A preliminary programme and other details will be circulated
as soon as possible.*